

=> fil reg
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STRUCTURE FILE UPDATES: 8 OCT 2009 HIGHEST RN 1187732-58-6
 DICTIONARY FILE UPDATES: 8 OCT 2009 HIGHEST RN 1187732-58-6

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<http://www.cas.org/support/stngen/stdoc/properties.html>

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L2      38 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON (463-79-6/BI OR
        10377-51-2/BI OR 105-58-8/BI OR 108-32-7/BI OR 108-88-3/BI
        OR 108554-72-9/BI OR 113187-28-3/BI OR 131651-65-5/BI OR
        1330-20-7/BI OR 14024-11-4/BI OR 14283-07-9/BI OR 18424-17-
        4/BI OR 21324-40-3/BI OR 24599-21-1/BI OR 25496-08-6/BI OR
        27359-10-0/BI OR 29935-35-1/BI OR 33454-82-9/BI OR
        35363-40-7/BI OR 37220-89-6/BI OR 41891-54-7/BI OR
        4437-85-8/BI OR 4472-22-4/BI OR 462-06-6/BI OR 4645-32-3/BI
        OR 4851-64-3/BI OR 56525-42-9/BI OR 616-38-6/BI OR
        623-53-0/BI OR 623-96-1/BI OR 682-30-4/BI OR 71-43-2/BI OR
        7439-93-2/BI OR 7447-41-8/BI OR 7791-03-9/BI OR 78-67-1/BI
        OR 90076-65-6/BI OR 96-49-1/BI)
L3      9 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L2 AND P/ELS
L4      1417509 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON (P(L)O)/ELS
L5      44384 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L4 AND PMS/CI
L7      16344 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L4 AND PROPENOIC
        ACID?
L8      176900 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L4 AND ETHYL
        ESTER?
L9      2397 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L4 AND BUTENOIC
        ACID?
L10     32885 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L4 AND ETHENYL?
L11     131674 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L4 AND METHYLETHY
        L?
L12     8 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L3 AND (L7 OR L8
        OR L9 OR L10 OR L11)
L13     1409 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L12
L14     41850 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L5
L17     11355 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON "BATTERY ELECTROLY
        TES"+PPT,NT/CT
L21     26435 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L5 AND (PHOSPHIN?
        OR PHOSPHON?)
  
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L22 203815 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON (L7 OR L8 OR L9
 OR L10 OR L11) AND (PHOSPHIN? OR PHOSPHON?)
 L23 16945 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L21
 L24 128988 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L22
 L26 332 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON (L23 OR L24) AND
 BATTER?
 L28 143 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L26 AND DEV/RL
 L29 30 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L28 AND L23
 L30 31 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L13 AND ELECTROCHE
 M?/SC, SX
 L32 20 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L13 AND (ELECTRODE
 # OR ANODE# OR CATHODE# OR NEGATIVE ELECTRODE# OR POSITIVE
 ELECTRODE# OR BATTERY# OR BATTERIES#)
 L33 12 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L30 AND (ELECTRODE
 # OR ANODE# OR CATHODE# OR NEGATIVE ELECTRODE# OR POSITIVE
 ELECTRODE# OR BATTERY# OR BATTERIES#)
 L34 30 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L29 AND (ELECTRODE
 # OR ANODE# OR CATHODE# OR NEGATIVE ELECTRODE# OR POSITIVE
 ELECTRODE# OR BATTERY# OR BATTERIES#)
 L35 49 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON (L32 OR L33 OR
 L34)
 L37 25 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L35 AND (1840-2002
)/PRY, AY, PY
 L38 851 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L14 AND (ELECTRODE
 # OR ANODE# OR CATHODE# OR NEGATIVE ELECTRODE# OR POSITIVE
 ELECTRODE# OR BATTERY# OR BATTERIES#)
 L39 300 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L38 AND DEV/RL
 L41 118 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L39 AND ELECTROLYT
 ?
 L42 108 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L41 AND ELECTROCHE
 M?/SC, SX
 L43 68 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L42 AND (1840-200
 2)/PRY, AY, PY
 L44 24 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L43 AND L17
 L45 40 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L37 OR L44

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FILE 'HCAPLUS' ENTERED AT 10:39:50 ON 09 OCT 2009

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FILE COVERS 1907 - 9 Oct 2009 VOL 151 ISS 16

FILE LAST UPDATED: 8 Oct 2009 (20091008/ED)

REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2009

USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2009

HCAPLUS now includes complete International Patent Classification (IPC)

reclassification data for the third quarter of 2009.

CAS Information Use Policies apply and are available at:

<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d 145 1-40 ibib ed abs hitstr hitind

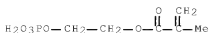
L45 ANSWER 1 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2004:118032 HCAPLUS [Full-text](#)
 DOCUMENT NUMBER: 140:165063
 TITLE: Anisotropically conductive films having good storage stability and high adhesion both to silica and to ITO
 INVENTOR(S): Hiraoka, Hidetoshi; Sakurai, Ryo; Miura, Akio; Morimura, Yasuhiro
 PATENT ASSIGNEE(S): Bridgestone Corp., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004043725	A	20040212	JP 2002-205799	20020715
			<--	
JP 4259056	B2	20090430	JP 2002-205799	20020715
PRIORITY APPLN. INFO.:			<--	

ED Entered STN: 13 Feb 2004

AB The films, useful for bonding of terminals of display panels and flexible printed circuit boards, are formed from conductive particle-dispersed photocurable resin compns. containing aliphatic unsatd. sidechain-containing poly(vinyl acetals) and phosphoryl (meth)acrylates. Thus, a composition of a reaction product of unsatd. sidechain-induced vinyl butyral resin and P1M (phosphoryl methacrylate) 100, (BzO)2 2, Super Beckamine L 125-60 (melamine resin) 5, pentaerythritol tetraacrylate 20, γ -methacryloxypropyltrimethoxysilane 0.5, and 16GNR10MX (conductive particle) 4 parts was pasted on a separator film and dried to give an adhesive film which showed reliable boning of terminal-formed flexible printed circuit boards and good elec. interconnection.

IT 24599-21-1DP, Light Ester P 1M, reaction products with sidechain-unsatd. vinyl butyral resins (unsatd. sidechain-containing, reaction products with phosphoryl methacrylate; storage-stable conductive adhesive films containing phosphoryl methacrylate-modified vinyl acetal resins)
 RN 24599-21-1 HCAPLUS
 CN 2-Propenoic acid, 2-methyl-, 2-(phosphonoxy)ethyl ester (CA INDEX NAME)



IC ICM C09J007-00
 ICS C08F290-12; C08J005-18; C09J009-02; C09J129-14; C09J133-04;
 C09J167-06; H01B001-22; H01B005-16; C08L029-04
 CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 76
 IT 50926-11-9, Indium tin oxide
 (adherent surface, terminal electrodes; storage-stable
 conductive adhesive films containing phosphoryl methacrylate-modified
 vinyl acetal resins)
 IT 24599-21-IDP, Light Ester P 1M, reaction products with
 sidechain-unsatd. vinyl butyral resins
 (unsatd. sidechain-containing, reaction products with phosphoryl
 methacrylate; storage-stable conductive adhesive films containing
 phosphoryl methacrylate-modified vinyl acetal resins)

L45 ANSWER 2 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2004:59637 HCAPLUS Full-text
 DOCUMENT NUMBER: 140:79861
 TITLE: Method of fabrication of lithium secondary
 battery
 INVENTOR(S): Lee, Jin-young; Lee, Kyoung-hee
 PATENT ASSIGNEE(S): S. Korea
 SOURCE: U.S. Pat. Appl. Publ., 7 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040013944	A1	20040122	US 2003-617811	20030714
KR 2004006781	A	20040124	KR 2002-41169	20020715
JP 2004039642	A	20040205	JP 2003-274506	20030715
JP 4202854	B2	20081224		
CN 1501542	A	20040602	CN 2003-165003	20030715
CN 1288791	C	20061206		
PRIORITY APPLN. INFO.:			KR 2002-41169	A 20020715

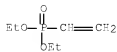
ED Entered STN: 23 Jan 2004

AB A lithium secondary battery of the present invention comprises a pos.
 electrode; a neg. electrode; a separator interposed between the pos. and neg.
 electrodes; and an electrolyte on the separator, wherein the electrolyte
 includes a nonaq. organic solvent, a lithium salt, and a linear polymer having
 P=O bonds. The electrolyte improves the swelling characteristics of lithium
 secondary batteries. A lithium secondary battery with the electrolyte and a
 method for preparing the electrolyte and battery is described.
 IT 682-30-4, Diethyl vinyl phosphonate 4472-22-4,
 Dipropyl vinyl phosphonate 4645-32-3, Dimethyl vinyl
 phosphonate 4851-64-3, Diethyl vinyl phosphate
 24599-21-1 41891-54-7, Triethyl
 3-methyl-4-phosphonocrotonate 108554-72-9
 113187-28-3, Allyl diethyl phosphonoacetate
 (method of fabrication of lithium secondary battery)

10/617,811

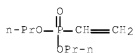
RN 682-30-4 HCAPLUS

CN Phosphonic acid, P-ethenyl-, diethyl ester (CA INDEX NAME)



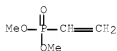
RN 4472-22-4 HCAPLUS

CN Phosphonic acid, ethenyl-, dipropyl ester (9CI) (CA INDEX NAME)



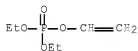
RN 4645-32-3 HCAPLUS

CN Phosphonic acid, P-ethenyl-, dimethyl ester (CA INDEX NAME)



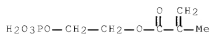
RN 4851-64-3 HCAPLUS

CN Phosphoric acid, ethenyl diethyl ester (CA INDEX NAME)



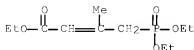
RN 24599-21-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(phosphonoxy)ethyl ester (CA INDEX NAME)



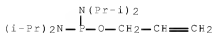
RN 41891-54-7 HCAPLUS

CN 2-Butenoic acid, 4-(diethoxyphosphinyl)-3-methyl-, ethyl ester (CA INDEX NAME)



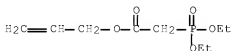
RN 108554-72-9 HCAPLUS

CN Phosphorodiamidous acid, N,N,N',N'-tetrakis(1-methylethyl)-, 2-propen-1-yl ester (CA INDEX NAME)



RN 113187-28-3 HCAPLUS

CN Acetic acid, 2-(diethoxyphosphinyl)-, 2-propen-1-yl ester (CA INDEX NAME)



IC ICM H01M010-40

INCL 429317000; 429307000; 429338000; 429342000; 429314000

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

ST lithium secondary battery fabrication

IT Aromatic hydrocarbons, uses

(C1-10 alkyl substituted; method of fabrication of lithium secondary battery)

IT Secondary batteries

(lithium; method of fabrication of lithium secondary battery)

IT Battery electrolytes

Swelling, physical

(method of fabrication of lithium secondary battery)

IT Esters, uses

Ethers, uses

Ketones, uses

(method of fabrication of lithium secondary battery)

IT Lithium alloy, base

(method of fabrication of lithium secondary battery)

IT 71-43-2, Benzene, uses 96-49-1, Ethylene carbonate 105-58-8,

Diethyl carbonate 108-32-7, Propylene carbonate 108-88-3, Toluene,

uses 462-06-6, Fluorobenzene 463-79-6D, Carbonic acid, cyclic compds. 463-79-6D, Carbonic acid, linear compound 463-79-6D, Carbonic acid, organic compound 616-38-6, Dimethyl carbonate 623-53-0, Ethyl methyl carbonate 623-96-1, Dipropyl carbonate 1330-20-7, Xylene, uses 4437-85-8, Butylene carbonate 7447-41-8, Lithium chloride (LiCl), uses 7791-03-9, Lithium perchlorate 10377-51-2, Lithium iodide (LiI) 14024-11-4, Lithium tetrachloroaluminate 14283-07-9, Lithium tetrafluoroborate 18424-17-4, Lithium hexafluoroantimonate 21324-40-3, Lithium hexafluorophosphate 25496-08-6, Fluorotoluene 27359-10-0, Trifluorotoluene 29935-35-1, Lithium hexafluoroarsenate 33454-82-9, Lithium triflate 35363-40-7, Ethyl propyl carbonate, uses 37220-89-6, Lithium aluminate 56525-42-9, Methyl propyl carbonate, uses 90076-65-6 131651-65-5, Lithium nonafluorobutanesulfonate (method of fabrication of lithium secondary battery)

IT 7439-93-2, Lithium, uses (method of fabrication of lithium secondary battery)

IT 78-67-1, Azobisisobutyronitrile 682-30-4, Diethyl vinyl phosphonate 4472-22-4, Dipropyl vinyl phosphonate 4645-32-3, Dimethyl vinyl phosphonate 4851-64-3, Diethyl vinyl phosphate 24599-21-1 41891-54-7, Triethyl 3-methyl-4-phosphonocrotonate 108554-72-9 113187-28-3, Allyl diethyl phosphonoacetate (method of fabrication of lithium secondary battery)

L45 ANSWER 3 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2003:276684 HCAPLUS Full-text
 DOCUMENT NUMBER: 138:274124
 TITLE: Self-doped molecular composite battery
 electrolytes
 INVENTOR(S): Harrup, Mason K.; Wertsching, Alan K.; Stewart, Frederick F.
 PATENT ASSIGNEE(S): Bechtel Bwxt Idaho, LLC, USA
 SOURCE: U.S., 7 pp.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6544690	B1	20030408	US 2000-627462	20000728

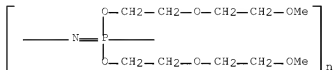
PRIORITY APPLN. INFO.:	US 2000-627462	20000728
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ED Entered STN: 10 Apr 2003

AB This invention is in solid polymer-based electrolytes for battery applications. It uses mol. composite technol., coupled with unique preparation techniques to render a self-doped, stabilized electrolyte material suitable for inclusion in both primary and secondary batteries. In particular, a salt is incorporated in a nano-composite material formed by the in situ catalyzed condensation of a ceramic precursor in the presence of a solvated polymer material, utilizing a condensation agent comprised of at least one cation amenable to SPE applications. As such, the counterion in the condensation agent used in the formation of the mol. composite is already present as the electrolyte matrix develops. This procedure effectively decouples the cation loading levels required for maximum ionic conductivity from electrolyte phys. properties associated with condensation agent loading

levels by utilizing the inverse relationship discovered between condensation agent loading and the time domain of the aging step.

IT 98973-15-0, MEEP
 (self-doped mol. composite battery electrolytes
)
 RN 98973-15-0 HCAPLUS
 CN Poly[nitrilo[bis[2-(2-methoxyethoxy)ethoxy]phosphoranylidyne]] (CA
 INDEX NAME)



IC ICM H01M006-18
 INCL 429306000; 429320000; 429322000; 252062200
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy
 Technology)
 Section cross-reference(s): 38, 57
 ST battery electrolyte self doped mol composite;
 polymer ceramic composite battery electrolyte
 IT Metal alkoxides
 (ceramic precursor; self-doped mol. composite battery
 electrolytes)
 IT Composites
 (ceramic-polymer; self-doped mol. composite battery
 electrolytes)
 IT Fluoropolymers, uses
 (molds; self-doped mol. composite battery
 electrolytes)
 IT Polyphosphazenes
 Polysiloxanes, processes
 (polyether-; self-doped mol. composite battery
 electrolytes)
 IT Polyethers, processes
 (polyphosphazene-; self-doped mol. composite battery
 electrolytes)
 IT Polythioethers
 (polyphosphazenes-; self-doped mol. composite battery
 electrolytes)
 IT Battery electrolytes
 Membranes, nonbiological
 Polymer electrolytes
 Primary batteries
 Secondary batteries
 (self-doped mol. composite battery electrolytes
)
 IT Polyphosphazenes
 Polysiloxanes, processes
 (self-doped mol. composite battery electrolytes
)
 IT Polyethers, processes
 (siloxane-; self-doped mol. composite battery
 electrolytes)
 IT 78-10-4, Teos 546-68-9, Tetrakis(isopropoxy)titanium 2269-22-9,

10/617,811

Aluminum tris(sec-butoxide) 7429-90-5D, Aluminum, alkoxide
7440-21-3D, Silicon, alkoxide 7440-32-6D, Titanium, alkoxide
7440-67-7D, Zirconium, alkoxide 51278-20-7, 1-Butanol, zirconium
salt

(ceramic precursor; self-doped mol. composite battery
electrolytes)

IT 1309-42-8, Magnesium hydroxide 1310-65-2, Lithium hydroxide
1310-73-2, Sodium hydroxide, processes

(condensation agent; self-doped mol. composite battery
electrolytes)

IT 9002-84-0, Teflon
(molds; self-doped mol. composite battery
electrolytes)

IT 98973-15-0, MEEP
(self-doped mol. composite battery electrolytes
)

IT 14283-07-9, Lithium tetrafluoroborate
(self-doped mol. composite battery electrolytes
)

OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS
RECORD (4 CITINGS)

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN THE
RE FORMAT

L45 ANSWER 4 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2003:81076 HCAPLUS Full-text

DOCUMENT NUMBER: 138:356122

TITLE: New directions in the development of polymer
electrolytes for lithium batteries

AUTHOR(S): Morris, R. Scott; Dixon, Brian G.; Dallek, Steven
CORPORATE SOURCE: Phoenix Innovation, Inc., Wareham, MA, 02576, USA

SOURCE: Proceedings of the Power Sources Conference (
2002), 40th, 143-146

CODEN: PPOCFD

PUBLISHER: National Technical Information Service

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 03 Feb 2003

AB Polymer electrolyte Li batteries represent the future of safe, high energy
battery systems. Advancement of ambient temperature polymer electrolyte
batteries will require new approaches. Hetero-atomic materials combine the
better features of several elements to solubilize and transport select Li
salts more efficiently than traditional ethylene oxide-type polymers. Ambient
temperature ionic conductivities of $>1 + 10^{-3}$ S/cm are common with this class
of polymer electrolyte. Rationale of this approach and material properties
are presented.

IT 518359-81-4D, lithium complexes 518359-84-7D,
lithium complexes
(phosphorous-containing polyester electrolytes for lithium
batteries)

RN 518359-81-4 HCAPLUS

CN Phosphorous acid, trimethyl ester, polymer with 1,2-ethanediol (9CI)
(CA INDEX NAME)

CM 1

CRN 121-45-9

CMF C3 H9 O3 P



CM 2

CRN 107-21-1

CMF C2 H6 O2



RN 518359-84-7 HCAPLUS

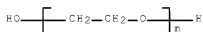
CN Phosphoric acid, trimethyl ester, polymer with
 α -hydro- ω -hydroxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX
 NAME)

CM 1

CRN 25322-68-3

CMF (C2 H4 O)_n H2 O

CCI PMS



CM 2

CRN 512-56-1

CMF C3 H9 O4 P



CC 52-2 (Electrochemical, Radiational, and Thermal Energy
 Technology)

ST phosphorous polyester cond polymer electrolyte lithium
 battery

IT Polyphosphoric acids
 (esters; phosphorous-containing polyester electrolytes for
 lithium batteries)

IT Battery electrolytes
Polymer electrolytes
(phosphorous-containing polyester electrolytes for lithium batteries)

IT Polyesters, uses
(phosphorus-containing; phosphorous-containing polyester electrolytes for lithium batteries)

IT 90076-65-6, Lithium bis(trifluoromethyl sulfonyl)imide 132843-44-8,
Lithium bis(perfluoroethyl sulfonyl)imide
(electrolyte containing; phosphorous-containing polyester electrolytes for lithium batteries)

IT 7439-93-2D, Lithium, complex with phosphorous-containing polyesters
7791-03-9, Lithium perchlorate (LiClO₄)
(electrolyte; phosphorous-containing polyester electrolytes for lithium batteries)

IT 518359-81-4D, lithium complexes 518359-84-7D,
lithium complexes
(phosphorous-containing polyester electrolytes for lithium batteries)

L45 ANSWER 5 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2002:964987 HCAPLUS Full-text
DOCUMENT NUMBER: 138:26945
TITLE: New heteroatomic polymer for efficient solid polymer electrolytes for lithium batteries
INVENTOR(S): Morris, Robert Scott; Dixon, Brian Gilbert
PATENT ASSIGNEE(S): Phoenix Innovation, Inc., USA
SOURCE: U.S. Pat. Appl. Publ., 6 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 20020192563	A1	20021219	US 2001-837740	20010417
			<--	
US 6727343	B2	20040427		
PRIORITY APPLN. INFO.:			US 2001-837740	20010417
			<--	

ED Entered STN: 20 Dec 2002

AB A new type of polymer is described that represents a new composition of matter. This polymer contains alternating electroneg. group III-VI elements connected with hydrocarbon or fluorocarbon linkages to form a polyalkyl or polyfluoroalkyl heteroat. polymer. These polymers can be combined with lithium salts to form a solid polymer electrolyte for use in electrochem. systems such as batteries. These new solid polymer electrolytes exhibit lithium cation diffusion and lithium cation transport nos. that are superior to similar solid polymer electrolytes composed of polyethylene oxide.

IT 478309-19-2P 478309-21-6P
(heteroat. polymer for efficient solid polymer electrolytes for lithium batteries)

RN 478309-19-2 HCAPLUS

CN 1,2-Ethanediol, polymer with 1,2-ethanedithylbis[phosphine] (9CI) (CA INDEX NAME)

CRN 5518-62-7
CMF C2 H8 P2



CM 2

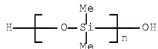
CRN 107-21-1
CMF C2 H6 O2



RN 478309-21-6 HCAPLUS
CN Phosphoric trichloride, polymer with
 α -hydro- ω -hydroxypoly[oxy(dimethylsilylene)] and
 α -hydro- ω -hydroxypoly(oxy-1,2-ethanediyl) (CA INDEX NAME)

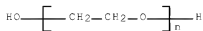
CM 1

CRN 31692-79-2
CMF (C2 H6 O Si) $_n$ H2 O
CCI PMS



CM 2

CRN 25322-68-3
CMF (C2 H4 O) $_n$ H2 O
CCI PMS



CM 3

CRN 10025-87-3

CMF C13 O P



- IC ICM H01M010-40
ICS C08J005-20
- INCL 429314000; 429317000; 429316000; 521025000
- CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38
- ST lithium battery heteroatomic polymer electrolyte
- IT Polyoxyalkylenes, uses
(fluorine- and sulfo-containing, ionomers; heteroat. polymer for efficient solid polymer electrolytes for lithium batteries)
- IT Battery electrolytes
Polymer electrolytes
(heteroat. polymer for efficient solid polymer electrolytes for lithium batteries)
- IT Alkali metal salts
Phosphonium compounds
Quaternary ammonium compounds, uses
(heteroat. polymer for efficient solid polymer electrolytes for lithium batteries)
- IT Primary batteries
(lithium; heteroat. polymer for efficient solid polymer electrolytes for lithium batteries)
- IT Fluoropolymers, uses
(polyoxyalkylene-, sulfo-containing, ionomers; heteroat. polymer for efficient solid polymer electrolytes for lithium batteries)
- IT Ionomers
(polyoxyalkylenes, fluorine- and sulfo-containing; heteroat. polymer for efficient solid polymer electrolytes for lithium batteries)
- IT 66796-30-3, Nafion 117
(heteroat. polymer for efficient solid polymer electrolytes for lithium batteries)
- IT 7791-03-9, Lithium perchlorate 90076-65-6 132843-44-8
(heteroat. polymer for efficient solid polymer electrolytes for lithium batteries)
- IT 478309-19-2P 478309-20-5P 478309-21-6P
(heteroat. polymer for efficient solid polymer electrolytes for lithium batteries)

L45 ANSWER 6 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2002:904593 HCAPLUS Full-text
DOCUMENT NUMBER: 138:15239
TITLE: Ion conductive polymer electrolyte, its manufacture, and secondary nonaqueous electrolyte battery
INVENTOR(S): Abe, Toshihiro; Sumita, Miwa
PATENT ASSIGNEE(S): Hitachi Maxell Ltd., Japan

10/617,811

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 2002343133	A	20021129	JP 2001-149581	20010518
			<--	
PRIORITY APPLN. INFO.:			JP 2001-149581	20010518
			<--	

ED Entered STN: 29 Nov 2002

AB The electrolyte is a polymer containing quaternary phosphonium salt units of the formula (PR₁R₂R₃)⁺X⁻ [R₁-3 = Me, Et, n-Pr, iso-Pr, n-Bu, n-C₅H₁₃ (sic), Ph, p-methylphenyl, and/or p-fluorophenyl groups; X⁻ = Cl, Br, I, NO₃, ClO₄, PF₆, AsF₆, SCN, BF₄, (CF₃SO₂)₂N, or (C₂F₅SO₂)₂N, p-trifluoromethylphenzenesulfonate, p-toluenesulfonate, benzotriazine, or EtPS₂ groups] attached to the mol. The electrolyte is prepared by hardening a liquid mixture, containing a polymerizable monomer having the quaternary phosphonium salt group at the end, a compound having ≥2 polymerizable functional groups, and an electrolyte salt.

IT 477247-59-9P 477281-67-7P 477281-68-8P
 (comps. and manufacture of ion conductive quaternary phosphonium salt polymer electrolytes for secondary lithium batteries)

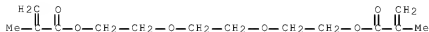
RN 477247-59-9 HCAPLUS

CN Phosphonium, tributyl[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-, tetrafluoroborate(1-), polymer with 1,2-ethanedylbis(oxy-2,1-ethanedyl) bis(2-methyl-2-propenoate) (9CI)
 (CA INDEX NAME)

CM 1

CRN 109-16-0

CMF C14 H22 O6



CM 2

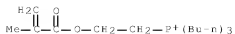
CRN 477247-58-8

CMF C18 H36 O2 P . B F4

CM 3

CRN 477247-57-7

CMF C18 H36 O2 P



CM 4

CRN 14974-70-5

CMF B F4

CCI CCS



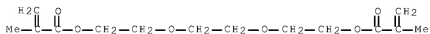
RN 477281-67-7 HCAPLUS

CN Phosphonium, tributyl[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-, O,O-diethyl phosphorodithioate (1:1), polymer with 1,2-ethanediylbis(oxy-2,1-ethanediyl) bis(2-methyl-2-propenoate) (9CI)
(CA INDEX NAME)

CM 1

CRN 109-16-0

CMF C14 H22 O6



CM 2

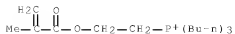
CRN 477281-66-6

CMF C18 H36 O2 P . C4 H10 O2 P S2

CM 3

CRN 477247-57-7

CMF C18 H36 O2 P



CM 4

CRN 40898-92-8

CMF C4 H10 O2 P S2



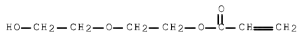
RN 477281-68-8 HCAPLUS

CN Phosphonium, tributyl [2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-, O,O-diethyl phosphorodithioate (1:1), polymer with 1,2-ethanediylbis(oxy-2,1-ethanediyl) bis(2-methyl-2-propenoate) and 2-(2-hydroxyethoxy)ethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 13533-05-6

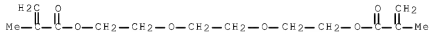
CMF C7 H12 O4



CM 2

CRN 109-16-0

CMF C14 H22 O6



CM 3

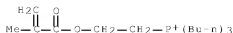
CRN 477281-66-6

CMF C18 H36 O2 P . C4 H10 O2 P S2

CM 4

CRN 477247-57-7

CMF C18 H36 O2 P



CM 5

CRN 40898-92-8

CMP C4 H10 O2 P S2

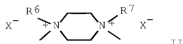
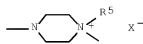


IC ICM H01B001-06
ICS H01B001-12; H01M010-40
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST secondary battery quaternary phosphonium salt polymer electrolyte manuf
IT Battery electrolytes
(comps. and manufacture of ion conductive quaternary phosphonium salt polymer electrolytes for secondary lithium batteries)
IT 96-49-1P, Ethylene carbonate 108-32-7P, Propylene carbonate 112-36-7P, Diethylene glycol, diethyl ether 14283-07-9P, Lithium fluoroborate 30714-78-4P, Ethyl butyl carbonate 477247-59-9P 477281-67-7P 477281-68-8P
(comps. and manufacture of ion conductive quaternary phosphonium salt polymer electrolytes for secondary lithium batteries)
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L45 ANSWER 7 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2002:886243 HCAPLUS [Full-text](#)
DOCUMENT NUMBER: 137:387083
TITLE: Nonaqueous gel composition containing crosslinked polymer having alkylammonium or piperazinium structure and electrochemical cell
INVENTOR(S): Aizawa, Wakana; Ikegami, Koshiro; Takada, Masakazu; Takaoka, Kazuchiyo
PATENT ASSIGNEE(S): Mitsubishi Paper Mills, Ltd., Japan; Nippon Unicar Co., Ltd.
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2002332417	A	20021122	JP 2001-138273
			20010509
PRIORITY APPLN. INFO.:			<--
			JP 2001-138273
			20010509
			<--
ED	Entered STN:	22 Nov 2002	
GI			



AB The title gel composition comprises a polymer having a crosslinked structure R1NX, R2NYNX2, R4NYNX, I, or II [R1-R7 = (substituted) C1-9 alkyl; X = monovalent inorg. or organic acid or its equivalent; Y = C1-8 alkylene, alkylene oxide, or xylylene]. The composition, especially suitable for secondary Li batteries and capacitors, has high resistance to free acids generated in an electrolyte solution

IT 476013-44-2P 476013-47-5P
(nonaq. gel electrolyte composition containing crosslinked polymer having alkylammonium or piperazinium structure for battery and capacitor)

RN 476013-44-2 HCAPLUS

CN Piperazinium, 1,4-bis[(4-ethenylphenyl)methyl]-1-methyl-, hexafluorophosphate(1-), polymer with α, α' -[1,2-ethanediy]bis[(dimethylsilylene)-3,1-propanediy]]bis[ω -[3-[[2-(dimethylsilyl)ethyl]dimethylsilyl]propoxy]poly(oxy-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

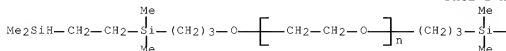
CM 1

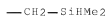
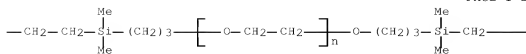
CRN 455947-50-9

CMF (C2 H4 O)_n (C2 H4 O)_n C30 H74 O2 Si6

CCI PMS

PAGE 1-A





CM 2

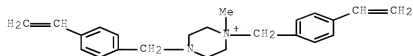
CRN 476013-43-1

CMF C23 H29 N2 . F6 P

CM 3

CRN 476013-42-0

CMF C23 H29 N2



CM 4

CRN 16919-18-9

CMF F6 P

CCI CCS



RN 476013-47-5 HCAPLUS

CN Piperazinium, 4,4'-(1,3-propanediyl)bis[1-[(4-ethenylphenyl)methyl]-1-ethyl-, bis(hexafluorophosphate(1-))], polymer with

10/617,811

α -(2-methyl-1-oxo-2-propenyl)- ω -[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) and $\alpha, \alpha', \alpha''$ -1,2,3-propanetriyltris[ω -[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

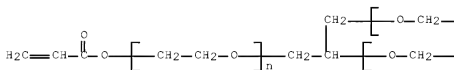
CM 1

CRN 101661-95-4

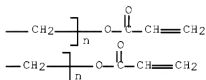
CMF (C2 H4 O)_n (C2 H4 O)_n (C2 H4 O)_n C12 H14 O6

CCI PMS

PAGE 1-A



PAGE 1-B

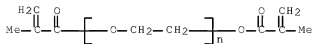


CM 2

CRN 25852-47-5

CMF (C2 H4 O)_n C8 H10 O3

CCI PMS



CM 3

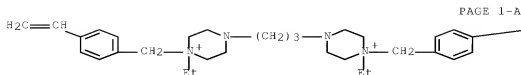
CRN 476013-46-4

CMF C33 H50 N4 . 2 F6 P

CM 4

CRN 476013-45-3

CMF C33 H50 N4



PAGE 1-B

CM 5

CRN 16919-18-9

CMF F6 P

CCI CCS



- IC ICM C08L101-02
ICS H01B001-06; H01G009-025; H01M010-40
- CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38, 76
- ST alkylammonium crosslinked polymer electrolyte capacitor;
piperazinium crosslinked polymer nonaq electrolyte battery
- IT Capacitors
(double layer; nonaq. gel electrolyte composition containing crosslinked polymer having alkylammonium or piperazinium structure for battery and capacitor)
- IT Secondary batteries
(lithium; nonaq. gel electrolyte composition containing crosslinked polymer having alkylammonium or piperazinium structure for battery and capacitor)
- IT Battery electrolytes
Crosslinking agents
Electrolytic capacitors
Polymer electrolytes
(nonaq. gel electrolyte composition containing crosslinked polymer having alkylammonium or piperazinium structure for battery and capacitor)
- IT Quaternary ammonium compounds, uses

- (polymers; nonaq. gel electrolyte composition containing crosslinked polymer having alkylammonium or piperazinium structure for battery and capacitor)
- IT 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 108-32-7, Propylene carbonate 429-06-1, Tetraethylammonium tetrafluoroborate 21324-40-3, Lithium hexafluorophosphate (composition containing; nonaq. gel electrolyte composition containing crosslinked polymer having alkylammonium or piperazinium structure for battery and capacitor)
- IT 1072-63-5DP, N-Vinylimidazole, polymers with alkylammonium compound and piperazinium compound 1337-81-1DP, Vinylpyridine, polymers with vinyl monomer and piperazinium compound 52352-11-1DP, Vinylbenzylamine, alkylammonium fluorophosphates, polymers with piperazinium compound 476013-44-2P 476013-47-5P 476013-48-6DP, polymers with vinyl monomer and piperazinium compound 476013-50-0DP, polymers with vinyl monomer (nonaq. gel electrolyte composition containing crosslinked polymer having alkylammonium or piperazinium structure for battery and capacitor)

L45 ANSWER 8 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2002:711001 HCAPLUS Full-text

DOCUMENT NUMBER: 137:235232

TITLE: Fluoroalkyl-containing phosphonic acid polymers, their manufacture, and their use in polymer electrolytes and secondary lithium ion batteries

INVENTOR(S): Sawada, Hideo; Kyokane, Jun; Sugiya, Tadashi; Ryukoku, Eiichi

PATENT ASSIGNEE(S): Nippon Chemical Industrial Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2002265539	A	20020918	JP 2001-72303	20010314

PRIORITY APPLN. INFO.:	JP 2001-72303	20010314
	<--	
	<--	

ED Entered STN: 19 Sep 2002

AB The polymers are represented by R1[CH2C(COC2H4Z)R3]nAbR2 {R1, R2 = (CF2)nY, CF(CF3)[OCF2CF(CF3)]POC3F7; Y = H, F, Cl; Z = glucosyloxy; n = 1-10; p = 0-10; R3 = H, Me; A = phosphonoethylene; a:b mol ratio = 1:99-99:1} and manufactured by reacting fluoroalkanoxy peroxides with 2-glucosyloxyethyl (meth)acrylates and vinylphosphonic acids. The polymer electrolytes using the polymers show high ion conductivity

IT 459409-02-0DP, fluoroalkyl-terminated, Li complexes (fluoroalkyl-containing phosphonic acid polymers and their manufacture for polymer electrolytes in secondary lithium ion batteries)

RN 459409-02-0 HCAPLUS

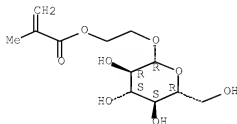
CN β -D-Glucopyranoside, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl, polymer with ethenylphosphonic acid (9CI) (CA INDEX NAME)

CM 1

CRN 47087-43-4

CMF C12 H20 O8

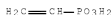
Absolute stereochemistry.



CM 2

CRN 1746-03-8

CMF C2 H5 O3 P



- IC ICM C08F220-20
ICS C08F230-02; H01B001-06; H01B001-12; H01M010-40
- CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38
- ST fluoroalkyl phosphonic acid polymer electrolyte lithium battery; glycosyloxyethyl methacrylate polymer electrolyte lithium battery; vinylphosphonic acid polymer electrolyte lithium battery; fluoroalkanoyl peroxide polymer electrolyte lithium battery
- IT Polymer electrolytes
(fluoroalkyl-containing phosphonic acid polymers and their manufacture for polymer electrolytes in secondary lithium ion batteries)
- IT Secondary batteries
(lithium; fluoroalkyl-containing phosphonic acid polymers and their manufacture for polymer electrolytes in secondary lithium ion batteries)
- IT 7439-93-2DP, Lithium, fluoroalkyl-terminated methacrylic vinylphosphonic polymer complexes
(fluoroalkyl-containing phosphonic acid polymers and their manufacture for polymer electrolytes in secondary lithium ion batteries)
- IT 56347-79-6DP, Diperfluoro-2-methyl-3-oxahexanoyl peroxide, reaction products with methacrylic vinylphosphonic acid polymers, Li complexes
459409-02-0DP, fluoroalkyl-terminated, Li complexes
(fluoroalkyl-containing phosphonic acid polymers and their manufacture for polymer electrolytes in secondary lithium ion batteries)
- IT 133414-70-7DP, reaction products with methacrylic vinylphosphonic acid polymers
(fluoroalkyl-containing phosphonic acid polymers and their manufacture for polymer electrolytes in secondary lithium ion batteries)
- OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L45 ANSWER 9 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2002:575465 HCAPLUS Full-text
 DOCUMENT NUMBER: 137:143037
 TITLE: Method for preparing thin fiber-structured polymer web
 INVENTOR(S): Lee, Wha Seop; Jo, Seong Mu; Chun, Suk Won; Choi, Sung Won
 PATENT ASSIGNEE(S): S. Korea
 SOURCE: U.S. Pat. Appl. Publ., 8 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20020100725	A1	20020801	US 2001-14550	20011214
			<--	
KR 2002063020	A	20020801	KR 2001-3685	20010126
			<--	
JP 2002249966	A	20020906	JP 2001-382608	20011217
			<--	
CN 1367276	A	20020904	CN 2002-102522	20020125
			<--	
PRIORITY APPLN. INFO.:			KR 2001-3685	A 20010126
			<--	

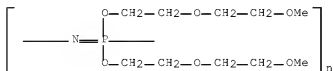
ED Entered STN: 02 Aug 2002

AB Disclosed is a method for preparing a thin fiber-structured polymer web suitable for a high-speed and large-scale production using electrospinning. The method uses an electrospinning process to spin a solution containing a polymer in a volatile solvent to obtain a thin fiber-structured polymer web on a collector, in which case the temperature of the polymer solution is in the range of from 40° to the b.p. of the solvent. The porous, thin fiber-structured polymer web thus obtained is applicable to the isolation layer or the electrolytic layer for lithium-ion secondary battery, lithium-metal secondary battery or sulfur-based secondary battery, the isolation layer for fuel cells, filter, and so forth.

IT 98973-15-0, Poly(bis-(2-(2-methoxyethoxyethoxy))phosphazene (method for preparing thin fiber-structured polymer web)

RN 98973-15-0 HCAPLUS

CN Poly[nitrilo[bis[2-(2-methoxyethoxy)ethoxy]phosphoranylidene]] (CA INDEX NAME)



IC ICM B01D039-08

INCL 210503000

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

Section cross-reference(s): 37, 47

ST battery electrolyte layer fiber structured polymer web; sulfur based secondary battery fiber structured polymer web; lithium secondary battery fiber structured polymer web; fuel cell fiber structured polymer web; filter fiber structured polymer web

IT Secondary batteries
(lithium; method for preparing thin fiber-structured polymer web)

IT Battery electrolytes
Coal tar pitch
Filters
Fuel cells
Petroleum pitch
Secondary batteries
Sensors
(method for preparing thin fiber-structured polymer web)

IT 9002-86-2, Polyvinyl chloride 9002-88-4, Polyethylene 9002-89-5, Polyvinyl alcohol 9002-98-6, PolyAziridine 9003-20-7, Polyvinyl acetate 9003-55-8, Butadiene-styrene copolymer 9004-34-6, Cellulose, uses 9004-35-7, Cellulose acetate 9004-36-8 9011-08-9 9011-14-7, Pmma 9011-17-0, Hexafluoropropylene-vinylidene fluoride copolymer 24937-16-4, Nylon 12 24937-79-9, PvdF 24980-34-5, Ethylene sulfide polymer 24980-41-4, Caprolactone homopolymer 25014-41-9, Polyacrylonitrile 25038-59-9, Polyethylene terephthalate, uses 25085-53-4, Isotactic polypropylene 25086-89-9, Vinyl acetate-vinyl pyrrolidone copolymer 25233-30-1, Polyaniline 25322-69-4, Polypropylene oxide 25569-53-3, Poly(ethylene succinate) 25749-57-9 26063-00-3, Polyhydroxybutyrate) 26100-51-6, Polylactic acid 26124-68-5, Polyglycolic acid 27083-66-5, Poly(propylene fumarate) 34346-01-5, Glycolic acid-DL-lactic acid copolymer 50327-22-5 98973-15-0, Poly(bis-(2-(2-methoxy-ethoxyethoxy))phosphazene 98973-15-0, Meep
(method for preparing thin fiber-structured polymer web)

OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)

L45 ANSWER 10 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2002:559863 HCAPLUS Full-text

DOCUMENT NUMBER: 137:265521

TITLE: Computational chemistry: Design and experimental verification of pre-designed heteropolymer electrolytes for rechargeable lithium batteries

AUTHOR(S): Dixon, Brian G.; Morris, R. Scott

CORPORATE SOURCE: Phoenix Innovation, Inc., West Wareham, MA, 02576, USA

SOURCE: PMSE Preprints (2002), 87, 127-128

CODEN: PPMRA9; ISSN: 1550-6703

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal; (computer optical disk)

LANGUAGE: English

ED Entered STN: 29 Jul 2002

AB The use of computational chemical for designing and evaluating the performance of potential systems as a function of chemical structure (both the polymer and the salt), solvent, and temperature is described. New polymer structures were modeled using mol. dynamics simulations to estimate the rate of diffusion of lithium cations (as well as the anion) through a polymer matrix. Promising candidates were screened by structure and then synthesized and electrochem. characterized. These predictive studies can significantly enhance the rate of return of an associated exptl. program.

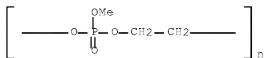
10/617,811

IT 59199-82-5 85337-87-7 159508-08-4
461671-69-2

(use of computational chemical for design and exptl. verification of
pre-designed heteropolymer electrolytes for rechargeable
lithium batteries)

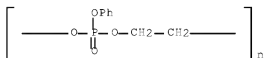
RN 59199-82-5 HCAPLUS

CN Poly[oxy(methoxyphosphinyldene)oxy-1,2-ethanediyl] (CA INDEX NAME)



RN 85337-87-7 HCAPLUS

CN Poly[oxy(phenoxyphosphinyldene)oxy-1,2-ethanediyl] (9CI) (CA INDEX NAME)



RN 159508-08-4 HCAPLUS

CN Phosphoric acid, monomethyl ester, polymer with 1,2-ethanediol (9CI)
(CA INDEX NAME)

CM 1

CRN 812-00-0

CMF C H5 O4 P



CM 2

CRN 107-21-1

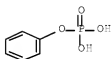
CMF C2 H6 O2



RN 461671-69-2 HCAPLUS
 CN Phosphoric acid, monophenyl ester, polymer with 1,2-ethanediol (9CI)
 (CA INDEX NAME)

CM 1

CRN 701-64-4
 CMF C6 H7 O4 P



CM 2

CRN 107-21-1
 CMF C2 H6 O2



CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 Section cross-reference(s): 38
 ST mol dynamic simulation polymer **electrolyte** design lithium **battery**
 IT Simulation and Modeling
 (mol. dynamics; use of computational chemical for design and exptl. verification of pre-designed heteropolymer **electrolytes** for rechargeable lithium **batteries**)
 IT **Battery electrolytes**
 (use of computational chemical for design and exptl. verification of pre-designed heteropolymer **electrolytes** for rechargeable lithium **batteries**)
 IT Polyoxymethylenes, uses
 Polyoxymethylenes, uses
 (use of computational chemical for design and exptl. verification of pre-designed heteropolymer **electrolytes** for rechargeable lithium **batteries**)
 IT 7447-41-8, Lithium chloride, uses 7791-03-9, Lithium perchlorate
 (electrolyte; use of computational chemical for design and exptl. verification of pre-designed heteropolymer **electrolytes** for rechargeable lithium **batteries**)
 IT 25322-68-3, Polyethylene oxide 25322-69-4, Polypropylene oxide
 59199-82-5 85337-87-7 159508-08-4
 461671-69-2
 (use of computational chemical for design and exptl. verification of pre-designed heteropolymer **electrolytes** for rechargeable lithium **batteries**)

10/617,811

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS
RECORD (1 CITINGS)

L45 ANSWER 11 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2002:518117 HCAPLUS Full-text

DOCUMENT NUMBER: 137:81368

TITLE: Alkaline battery containing surfactant
film for electrolyte leakage prevention
Matsuhisa, Ichiro; Adachi, Koji; Umebayashi,
Takayuki

INVENTOR(S): Matsushita Electric Industrial Co., Ltd., Japan

PATENT ASSIGNEE(S): Jpn. Kokai Tokkyo Koho, 5 pp.

SOURCE: CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE -----
JP 2002198015	A	20020712	JP 2000-396009	20001226
			<--	
JP 3814480	B2	20060830		
PRIORITY APPLN. INFO.:			JP 2000-396009	20001226
			<--	

ED Entered STN: 12 Jul 2002

AB The title battery is equipped with a synthetic resin-made gasket for sealing an opening of a battery case, a current collector inserted in a boss part of the gasket, and an electrolyte solution filled in the case, where three-phase interface of the boss, the current collector, and the electrolyte solution is covered with a film containing a surfactant. Preferably, the surfactant is an anionic surfactant or a nonionic surfactant. The battery is prevented from electrolyte leakage caused by deterioration of the gasket.

IT 9056-42-2D, Polyoxyethylene phosphate, potassium salt
25852-91-9D, Polyoxyethylene phosphate, potassium salt
(alkaline battery containing surfactant film for preventing electrolyte leakage at gasket)

RN 9056-42-2 HCAPLUS

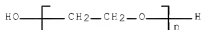
CN Poly(oxy-1,2-ethanediyl), α -hydro- ω -hydroxy-, phosphate
(CA INDEX NAME)

CM 1

CRN 25322-68-3

CMF (C2 H4 O)_n H2 O

CCI PMS



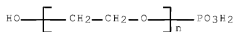
CM 2

CRN 7664-38-2

CMF H3 O4 P



RN 25852-91-9 HCAPLUS
 CN Poly(oxy-1,2-ethanediyl), α -phosphono- ω -hydroxy- (CA
 INDEX NAME)



IC ICM H01M002-08
 ICS H01M002-08; H01M006-08
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 ST alk battery surfactant film gasket leakage prevention
 IT Gaskets
 Primary batteries
 (alkaline battery containing surfactant film for preventing
 electrolyte leakage at gasket)
 IT Surfactants
 (anionic; alkaline battery containing surfactant film for
 preventing electrolyte leakage at gasket)
 IT Polyamides, uses
 (gaskets; alkaline battery containing surfactant film for
 preventing electrolyte leakage at gasket)
 IT Surfactants
 (nonionic; alkaline battery containing surfactant film for
 preventing electrolyte leakage at gasket)
 IT 7664-38-2D, Phosphoric acid, alkyl esters, potassium salts
 9056-42-2D, Polyoxyethylene phosphate, potassium salt
 25852-91-9D, Polyoxyethylene phosphate, potassium salt
 (alkaline battery containing surfactant film for preventing
 electrolyte leakage at gasket)

L45 ANSWER 12 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2001:868873 HCAPLUS Full-text
 DOCUMENT NUMBER: 136:9101
 TITLE: Fabrication method for lithium secondary
 battery with polymer electrolyte
 prepared by spray method
 INVENTOR(S): Yun, Kyung Suk; Cho, Byung Won; Cho, Won Il; Kim,
 Hyung Sun; Kim, Un Seok
 PATENT ASSIGNEE(S): Korea Institute of Science and Technology, S.
 Korea
 SOURCE: PCT Int. Appl., 34 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
WO 2001091222	A1	20011129	WO 2000-KR515	20000522
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W: JP, KR, US				
PRIORITY APPLN. INFO.:			WO 2000-KR515	20000522
			<--	

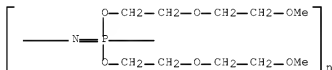
ED Entered STN: 30 Nov 2001

AB The present invention provides a lithium secondary battery and its fabrication method. More particularly, the present invention provides a lithium secondary battery comprising a porous polymer electrolyte and its fabrication method, wherein the polymer electrolyte is fabricated by the following process: (a) dissolving at least one polymer with plasticizers and organic electrolyte solvents to obtain at least one polymeric electrolyte solution; (b) adding the obtained polymeric electrolyte solution to a barrel of a spray machine, and (c) spraying the polymeric electrolyte solution onto a substrate using a nozzle to form a porous polymer electrolyte film. The lithium secondary battery of the present invention has advantages of better adhesion with electrodes, good mech. strength, better performance at low and high temps., and better compatibility with organic electrolytes of a lithium secondary battery.

IT 98973-15-0, Poly[bis(2-(2-methoxyethoxyethoxy))-phosphazene]
(fabrication method for lithium secondary battery with
polymer electrolyte prepared by spray method)

RN 98973-15-0 HCAPLUS

CN Poly[nitrilo[bis(2-(2-methoxyethoxy)ethoxy)phosphoranylidene]] (CA
INDEX NAME)



IC ICM H01M010-38

CC 52-2 (Electrochemical, Radiational, and Thermal Energy
Technology)

Section cross-reference(s): 38

ST polymer electrolyte lithium secondary battery;
spray method fabrication polymer electrolyte lithium
secondary battery

IT Inductance

(electrostatic, spray method; fabrication method for lithium
secondary battery with polymer electrolyte
prepared by spray method)

IT Battery electrolytes

Lamination

Plasticizers

Polymer electrolytes

(fabrication method for lithium secondary battery with
polymer electrolyte prepared by spray method)

IT Fluoropolymers, uses

Polyoxyalkylenes, uses

(fabrication method for lithium secondary battery with
polymer electrolyte prepared by spray method)

- IT Fluoropolymers, uses
(filling agent; fabrication method for lithium secondary battery with polymer electrolyte prepared by spray method)
- IT Secondary batteries
(lithium; fabrication method for lithium secondary battery with polymer electrolyte prepared by spray method)
- IT Alcohols, uses
(plasticizer; fabrication method for lithium secondary battery with polymer electrolyte prepared by spray method)
- IT Coating process
(spray; fabrication method for lithium secondary battery with polymer electrolyte prepared by spray method)
- IT 79-20-9, Methyl acetate 105-37-3, Ethyl propionate 109-99-9, Thf, uses 141-78-6, Ethyl acetate, uses 554-12-1, Methyl propionate 7782-42-5, Graphite, uses 7791-03-9, Lithium perchlorate 9002-86-2, Pvc 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-20-7, Polyvinyl acetate 9004-34-6, Cellulose, uses 9004-35-7, Cellulose acetate 9004-36-8 9004-39-1, Cellulose acetate propionate 9010-76-8, Acrylonitrile-vinylidene chloride copolymer 9010-88-2, Ethyl acrylate-methylmethacrylate copolymer 9011-14-7, Pmma 9011-17-0, Hexafluoropropylene-vinylidene fluoride copolymer 12190-79-3, Cobalt lithium oxide colio2 14283-07-9, Lithium tetrafluoroborate 1324-40-3, Lithium hexafluorophosphate 24937-79-9, PvdF 24968-79-4, Acrylonitrile-methyl acrylate copolymer 24980-34-5, Polyethylenesulfide 25014-41-9, Polyacrylonitrile 25086-89-9, Vinyl acetate-vinyl pyrrolidone copolymer 25322-68-3, Pco 25322-69-4, Polypropylene oxide 25667-11-2, Polyethylenesuccinate 26913-06-4, Poly[imino(1,2-ethanediy)] 28726-47-8, Poly(oxymethylene-oxyethylene) 29935-35-1, Lithium hexafluoroarsenate 33454-82-9, Lithium triflate 98973-15-0, Poly[bis(2-(2-methoxyethoxyethoxy))-phosphazene]
(fabrication method for lithium secondary battery with polymer electrolyte prepared by spray method)
- IT 554-13-2, Lithium carbonate 1304-28-5, Barium oxide bao, uses 1309-48-4, Magnesia, uses 1310-65-2, Lithium hydroxide 1313-59-3, Sodium oxide, uses 1344-28-1, Alumina, uses 7631-86-9, Silica, uses 7789-24-4, Lithium fluoride, uses 9002-84-0, Ptfе 12003-67-7, Aluminum lithium oxide alio2 12047-27-7, Barium titanium oxide batio3, uses 12057-24-8, Lithia, uses 13463-67-7, Titania, uses 26134-62-3, Lithium nitride
(filling agent; fabrication method for lithium secondary battery with polymer electrolyte prepared by spray method)
- IT 67-64-1, Acetone, uses 67-68-5, DmsO, uses 68-12-2, Dmf, uses 80-73-9, 1,3-Dimethyl-2-imidazolidinone 96-48-0, Butyrolactone 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 108-32-7, Propylene carbonate 110-71-4, 1,2-Dimethoxyethane 127-19-5, n,n-Dimethyl acetamide 143-24-8, Tetraethylene glycol dimethyl ether 616-38-6, Dimethyl carbonate 623-53-0, Ethyl methyl carbonate 872-50-4, n-Methyl-2-pyrrolidone, uses 4437-85-8, Butylene carbonate 26101-52-0
(plasticizer; fabrication method for lithium secondary battery with polymer electrolyte prepared by spray method)

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 13 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2001:868872 HCAPLUS Full-text
 DOCUMENT NUMBER: 136:9100
 TITLE: A lithium secondary battery comprising
 composite polymer electrolyte fabricated
 by a spray method
 INVENTOR(S): Yun, Kyung Suk; Cho, Byung Won; Cho, Won Il; Kim,
 Hyung Sun; Kim, Un Seok
 PATENT ASSIGNEE(S): Korea Institute of Science and Technology, S.
 Korea
 SOURCE: PCT Int. Appl., 38 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
WO 2001091221	A1	20011129	WO 2000-KR514	20000522
			<--	

W: JP, KR, US		
PRIORITY APPLN. INFO.:	WO 2000-KR514	20000522
	<--	

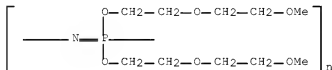
ED Entered STN: 30 Nov 2001

AB The present invention provides a novel composite polymer electrolyte, lithium secondary battery comprising the composite polymer electrolyte and their fabrication methods. More particularly, the present invention provides the composite polymer electrolyte comprising a porous polymer electrolyte matrix with particles, fibers or mixture thereof having diams. of 1-3000 nm, polymers and lithium salt-dissolved organic electrolyte sols. incorporated into the porous polymer matrix. The composite polymer electrolyte of the present invention has advantages of better adhesion with electrodes, good mech. strength, better performance at low and high temps., better compatibility with organic electrolytes of lithium secondary battery and it can be applied to the manufacture of lithium secondary batteries.

IT 98973-15-0, Poly[bis(2-(2-methoxyethoxyethoxy))phosphazene]
 (lithium secondary battery comprising composite polymer
 electrolyte fabricated by spray method)

RN 98973-15-0 HCAPLUS

CN Poly[nitrilo[bis[2-(2-methoxyethoxy)ethoxy]phosphoranylidene]] (CA
 INDEX NAME)



IC ICM H01M010-38

CC 52-2 (Electrochemical, Radiational, and Thermal Energy
 Technology)

Section cross-reference(s): 38

ST lithium secondary battery composite polymer
 electrolyte; spray method fabrication composite polymer
 electrolyte

- IT Inductance
(electrostatic induction spray; lithium secondary battery comprising composite polymer electrolyte fabricated by spray method)
- IT Fluoropolymers, uses
(filling agent; lithium secondary battery comprising composite polymer electrolyte fabricated by spray method)
- IT Battery electrolytes
Plasticizers
Polymer electrolytes
(lithium secondary battery comprising composite polymer electrolyte fabricated by spray method)
- IT Fluoropolymers, uses
Polyoxyalkylenes, uses
(lithium secondary battery comprising composite polymer electrolyte fabricated by spray method)
- IT Secondary batteries
(lithium; lithium secondary battery comprising composite polymer electrolyte fabricated by spray method)
- IT Alcohols, uses
(plasticizer; lithium secondary battery comprising composite polymer electrolyte fabricated by spray method)
- IT Coating process
(spray; lithium secondary battery comprising composite polymer electrolyte fabricated by spray method)
- IT 554-13-2, Lithium carbonate 1304-28-5, Barium oxide baa, uses 1309-48-4, Magnesia, uses 1310-65-2, Lithium hydroxide 1313-59-3, Sodium oxide na2o, uses 1344-28-1, Alumina, uses 7631-86-9, Silica, uses 7789-24-4, Lithium fluoride, uses 9002-84-0, Ptfе 12003-67-7, Aluminum lithium oxide alio2 12047-27-7, Barium titanium oxide batio3, uses 12057-24-8, Lithia, uses 13463-67-7, Titania, uses 26134-62-3, Lithium nitride
(filling agent; lithium secondary battery comprising composite polymer electrolyte fabricated by spray method)
- IT 79-20-9, Methyl acetate 96-48-0, γ -Butyrolactone 96-49-1, Ethylene carbonate 105-37-3, Ethyl propionate 105-58-8, Diethyl carbonate 108-32-7, Propylene carbonate 109-99-9, Thf, uses 110-71-4, 1,2-Dimethoxyethane 127-19-5, Dimethyl acetamide 141-78-6, Ethyl acetate, uses 554-12-1, Methyl propionate 616-38-6, Dimethyl carbonate 623-53-0, Ethyl methyl carbonate 4437-85-8, Butylene carbonate 7782-42-5, Graphite, uses 7791-03-9, Lithium perchlorate 9002-86-2, Pvc 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-20-7, Polyvinyl acetate 9004-34-6, Cellulose, uses 9004-35-7, Cellulose acetate 9004-36-8 9004-39-1, Cellulose acetate propionate 9010-76-8, Acrylonitrile-vinylidene chloride copolymer 9010-88-2, Ethyl acrylate-methyl methacrylate copolymer 9011-14-7, Pmma 9011-17-0, Hexafluoropropylene-vinylidene fluoride copolymer 12190-79-3, Cobalt lithium oxide colio2 14283-07-9, Lithium tetrafluoroborate 21324-40-3, Lithium hexafluorophosphate 24937-79-9, Pvdф 24968-79-4, Acrylonitrile-methylacrylate copolymer 24980-34-5, Polyethylene sulfide 25014-41-9, Polyacrylonitrile 25086-89-9, Vinyl acetate-vinylpyrrolidone copolymer 25322-68-3, Pео 25322-69-4, Polypropylene oxide 25667-11-2, Polyethylenesuccinate 25721-76-0, Polyethylene glycol dimethacrylate 26913-06-4, Poly[imino(1,2-ethanediy)] 28726-47-8, Poly(oxyethylene-oxyethylene) 29935-35-1, Lithium hexafluoroarsenate 33454-82-9, Lithium triflate 98973-15-0, Poly[bis(2-(2-methoxyethoxyethoxy))phosphazene]
(lithium secondary battery comprising composite polymer

electrolyte fabricated by spray method)
 IT 67-64-1, Acetone, uses 67-68-5, DmsO, uses 68-12-2, Dmf, uses
 80-73-9, 1,3-Dimethyl-2-imidazolidinone 143-24-8, Tetraethylene
 glycol dimethyl ether 872-50-4, n-Methyl-2-pyrrolidone, uses
 26101-52-0
 (plasticizer; lithium secondary battery comprising
 composite polymer electrolyte fabricated by spray method)
 REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE
 RE FORMAT

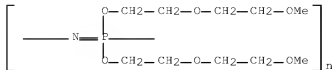
L45 ANSWER 14 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2001:868871 HCAPLUS [Full-text](#)
 DOCUMENT NUMBER: 136:9099
 TITLE: Fabrication of a lithium secondary battery
 comprising a hybrid polymer electrolyte
 prepared by a spray method
 INVENTOR(S): Yun, Kyung Suk; Cho, Byung Won; Cho, Won Il; Kim,
 Hyung Sun; Kim, Un Seok
 PATENT ASSIGNEE(S): Korea Institute of Science and Technology, S.
 Korea
 SOURCE: PCT Int. Appl., 39 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001091220	A1	20011129	WO 2000-KR513	20000522
<--				
W: JP, KR, US			WO 2000-KR513	20000522
PRIORITY APPLN. INFO.:			<--	

ED Entered STN: 30 Nov 2001

AB The present invention provides a novel hybrid polymer electrolyte, a lithium secondary battery comprising the hybrid polymer electrolyte and their fabrication methods. More particularly, the present invention provides the hybrid polymer electrolyte comprising a porous polymer matrix with particles, fibers or mixture thereof having diams. of 1-3000 nm, polymers and lithium salt-dissolved organic electrolyte solns. incorporated into the porous polymer matrix. The hybrid polymer electrolyte has advantages of better adhesion with electrodes, good mech. strength, better performance at low- and high-temps., better compatibility with organic electrolytes of a lithium secondary battery and it can be applied to the manufacture of lithium secondary batteries.

IT 98973-15-0, Poly[bis(2-(2-methoxyethoxyethoxy))phosphazene]
 (fabrication of lithium secondary battery comprising
 hybrid polymer electrolyte prepared by spray method)
 RN 98973-15-0 HCAPLUS
 CN Poly[nitrilo[bis[2-(2-methoxyethoxy)ethoxy]phosphoranylidene]] (CA
 INDEX NAME)



- IC ICM H01M010-38
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 Section cross-reference(s): 38
 ST lithium secondary battery hybrid polymer electrolyte
 ; spray method hybrid polymer electrolyte lithium secondary battery
 IT Inductance
 (electrostatic, spray method; fabrication of lithium secondary battery comprising hybrid polymer electrolyte prepared by spray method)
 IT Battery electrolytes
 Plasticizers
 Polymer electrolytes
 (fabrication of lithium secondary battery comprising hybrid polymer electrolyte prepared by spray method)
 IT Fluoropolymers, uses
 Polyoxymethylenes, uses
 (fabrication of lithium secondary battery comprising hybrid polymer electrolyte prepared by spray method)
 IT Fluoropolymers, uses
 (filling agent; fabrication of lithium secondary battery comprising hybrid polymer electrolyte prepared by spray method)
 IT Secondary batteries
 (lithium; fabrication of lithium secondary battery comprising hybrid polymer electrolyte prepared by spray method)
 IT Alcohols, uses
 (plasticizer; fabrication of lithium secondary battery comprising hybrid polymer electrolyte prepared by spray method)
 IT Coating process
 (spray; fabrication of lithium secondary battery comprising hybrid polymer electrolyte prepared by spray method)
 IT 79-20-9, Methyl acetate 96-48-0, γ -Butyrolactone 96-49-1, Ethylene carbonate 105-37-3, Ethyl propionate 105-58-8, Diethyl carbonate 108-32-7, Propylene carbonate 109-99-9, Thf, uses 110-71-4, 1,2-Dimethoxyethane 127-19-5, Dimethyl acetamide 141-78-6, Ethyl acetate, uses 554-12-1, Methyl propionate 616-38-6, Dimethyl carbonate 623-53-0, Ethyl methyl carbonate 4437-85-8, Methylene carbonate 7782-42-5, Graphite, uses 7791-03-9, Lithium perchlorate 9002-86-2, Pvc 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-20-7, Polyvinyl acetate 9004-34-6, Cellulose, uses 9004-35-7, Cellulose acetate 9004-36-8 9004-39-1, Cellulose acetate propionate 9010-76-8, Acrylonitrile-vinylidene chloride copolymer 9010-88-2, Ethyl acrylate-methyl methacrylate copolymer 9011-14-7, Pmma 9011-17-0, Hexafluoropropylene-vinylidene fluoride copolymer 12190-79-3, Cobalt lithium oxide colio2 14283-07-9, Lithium tetrafluoroborate 21324-40-3, Lithium hexafluorophosphate 24936-67-2, Polyethylene sulfide 24937-79-9, Polyvinylidene fluoride 24968-79-4, Acrylonitrile-methylacrylate copolymer 25014-41-9, Polyacrylonitrile 25086-89-9, Vinyl acetate-vinylpyrrolidone copolymer 25322-68-3, Pco 25322-69-4, Polypropylene oxide 25667-11-2, Polyethylene succinate 26570-48-9, Polyethylene glycol diacrylate 26913-06-4,

Poly[imino(1,2-ethanediyl)] 28726-47-8,
 Poly(oxyethyleneoxyethylene) 29935-35-1, Lithium hexafluoroarsenate
 33454-82-9, Lithium triflate 98973-15-0,
 Poly[bis(2-(2-methoxyethoxyethoxy))phosphazene]
 (fabrication of lithium secondary battery comprising
 hybrid polymer electrolyte prepared by spray method)
 IT 68-12-2, Dmf, uses 872-50-4, n-Methyl-2-pyrrolidone, uses
 26101-52-0
 (fabrication of lithium secondary battery comprising
 hybrid polymer electrolyte prepared by spray method)
 IT 554-13-2, Lithium carbonate 1304-28-5, Barium oxide hao, uses
 1309-48-4, Magnesia, uses 1310-65-2, Lithium hydroxide 1313-59-3,
 Sodium oxide na2o, uses 1344-28-1, Alumina, uses 7631-86-9,
 Silica, uses 7789-24-4, Lithium fluoride, uses 9002-84-0, Ptfе
 12003-67-7, Aluminum lithium oxide alio2 12047-27-7, Barium
 titanium oxide batio3, uses 12057-24-8, Lithia, uses 13463-67-7,
 Titania, uses 26134-62-3, Lithium nitride
 (filling agent; fabrication of lithium secondary battery
 comprising hybrid polymer electrolyte prepared by spray
 method)
 IT 67-64-1, Acetone, uses 67-68-5, Dmsо, uses 80-73-9,
 1,3-Dimethyl-2-imidazolidinone 143-24-8, Tetraethylene glycol
 dimethyl ether
 (plasticizer; fabrication of lithium secondary battery
 comprising hybrid polymer electrolyte prepared by spray
 method)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS
 RECORD (1 CITINGS)
 REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE
 RE FORMAT

L45 ANSWER 15 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2001:851557 HCAPLUS Full-text

DOCUMENT NUMBER: 135:374196

TITLE: Fabrication of a lithium secondary battery
 comprising a superfine fibrous polymer
 electrolyte

INVENTOR(S): Yun, Kyung Suk; Cho, Byung Won; Jo, Seong Mu; Lee,
 Wha Seop; Cho, Won Il; Park, Kun You; Kim, Hyung
 Sun; Kim, Un Seok; Ko, Seok Ku; Chun, Suk Won;
 Choi, Sung Won

PATENT ASSIGNEE(S): Korea Institute of Science and Technology, S.
 Korea

SOURCE: PCT Int. Appl., 33 pp.
 CODEN: PIXXD2

DOCUMENT TYPE: Patent
 LANGUAGE: English

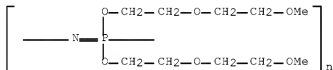
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001089023	A1	20011122	WO 2000-KR501	20000519
			<--	
W: JP, KR, US				
PRIORITY APPLN. INFO.:			WO 2000-KR501	20000519
			<--	

ED Entered STN: 23 Nov 2001

- AB The present invention provides a lithium secondary battery and its fabrication method. More particularly, the present invention provides a lithium secondary battery comprising super fine fibrous porous polymer electrolyte and its preparation method, wherein the polymer electrolyte is fabricated by the following process: (a) dissolving at least one polymer with plasticizers and y organic electrolyte solvents to obtain at least one polymeric electrolyte solution; (b) adding the obtained polymeric electrolyte solution to a barrel of an electrospinning machine; and, (c) electrospinning the polymeric electrolyte solution onto a substrate using a nozzle to form a polymer electrolyte film. The lithium secondary battery of the present invention has advantages of better adhesion with electrodes, good mech. strength, better performance at low and high temps., and better compatibility with organic electrolytes of a lithium secondary battery.
- IT 98973-15-0, Poly[bis(2-(2-methoxyethoxyethoxy)phosphazene)]
(fabrication of lithium secondary battery comprising
superfine fibrous polymer electrolyte)
- RN 98973-15-0 HCAPLUS
- CN Poly[nitrilo[bis(2-(2-methoxyethoxy)ethoxy)phosphoranylidene]] (CA
INDEX NAME)



- IC ICM H01M010-40
- CC 52-2 (Electrochemical, Radiational, and Thermal Energy
Technology)
Section cross-reference(s): 38
- ST lithium secondary battery superfine fibrous polymer
electrolyte
- IT Battery electrolytes
Plasticizers
Polymer electrolytes
(fabrication of lithium secondary battery comprising
superfine fibrous polymer electrolyte)
- IT Fluoropolymers, uses
Polyoxyalkylenes, uses
(fabrication of lithium secondary battery comprising
superfine fibrous polymer electrolyte)
- IT Fluoropolymers, uses
(filling agent; fabrication of lithium secondary battery
comprising superfine fibrous polymer electrolyte)
- IT Secondary batteries
(lithium; fabrication of lithium secondary battery
comprising superfine fibrous polymer electrolyte)
- IT Alcohols, uses
(plasticizer; fabrication of lithium secondary battery
comprising superfine fibrous polymer electrolyte)
- IT Fibers
(spinning, electrospinning; fabrication of lithium secondary
battery comprising superfine fibrous polymer
electrolyte)
- IT 79-20-9, Methyl acetate 105-37-3, Ethyl propionate 109-99-9, Thf,
uses 141-78-6, Ethyl acetate, uses 554-12-1, Methyl propionate

7791-03-9, Lithium perchlorate 9002-86-2, Pvc 9002-88-4,
Polyethylene 9003-07-0, Polypropylene 9003-20-7, Polyvinyl acetate
9004-34-6, Cellulose, uses 9004-35-7, Cellulose acetate 9004-36-8
9004-39-1, Cellulose acetate propionate 9010-76-8,
Acrylonitrile-vinylidene chloride copolymer 9010-88-2, Ethyl
acrylate-methyl methacrylate copolymer 9011-14-7, Pmma 9011-17-0,
Hexafluoropropylene-vinylidene fluoride copolymer 12190-79-3, Cobalt
lithium oxide colio2 14283-07-9, Lithium tetrafluoroborate
21324-40-3, Lithium hexafluorophosphate 24936-67-2,
Polyethylenesulfide 24937-79-9, PvdF 24968-79-4,
Acrylonitrile-methylacrylate copolymer 25014-41-9, Polyacrylonitrile
25086-89-9, Vinyl acetate-vinylpyrrolidone copolymer 25266-14-2,
Oxyethylene-oxyethylene copolymer 25322-68-3, Peo 25322-69-4,
Polypropylene oxide 25569-53-3, Polyethylenesuccinate 26913-06-4,
Poly[imino(1,2-ethanedyl)] 29935-35-1, Lithium hexafluoroarsenate
33454-82-9, Lithium triflate 98973-15-0,
Poly[bis(2-(2-methoxyethoxyethoxy)phosphazene)]
(fabrication of lithium secondary battery comprising
superfine fibrous polymer electrolyte)
IT 7631-86-9, Silica, uses 26101-52-0
(fabrication of lithium secondary battery comprising
superfine fibrous polymer electrolyte)
IT 13463-67-7, Titania, uses
(filling agent; fabrication of lithium secondary battery
comprising superfine fibrous polymer electrolyte)
IT 554-13-2, Lithium carbonate 1304-28-5, Barium oxide bao, uses
1309-48-4, Magnesia, uses 1310-65-2, Lithium hydroxide 1313-59-3,
Sodium oxide, uses 1344-28-1, Alumina, uses 7789-24-4, Lithium
fluoride, uses 9002-84-0, PtfE 12003-67-7, Aluminum lithium oxide
alio2 12047-27-7, Barium titanium oxide batio3, uses 12057-24-8,
Lithia, uses 26134-62-3, Lithium nitride
(filling agent; fabrication of lithium secondary battery
comprising superfine fibrous polymer electrolyte)
IT 67-64-1, Acetone, uses 67-68-5, DmsO, uses 68-12-2, Dmf, uses
80-73-9, 1,3-Dimethyl-2-imidazolidinone 96-48-0, Butyrolactone
96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 108-32-7,
Propylene carbonate 110-71-4, 1,2-Dimethoxyethane 127-19-5,
n,n-Dimethyl acetamide 143-24-8, Tetraethylene glycol dimethyl ether
616-38-6, Dimethyl carbonate 623-53-0, Ethyl methyl carbonate
872-50-4, N-Methyl-2-pyrrolidone, uses 4437-85-8, Butylene carbonate
(plasticizer; fabrication of lithium secondary battery
comprising superfine fibrous polymer electrolyte)
OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS
RECORD (4 CITINGS)
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN THE
RE FORMAT
L45 ANSWER 16 OF 40 HCAPLUS COPYRIGHT 2009 ACS ON STN
ACCESSION NUMBER: 2001:851555 HCAPLUS Full-text
DOCUMENT NUMBER: 135:374194
TITLE: Fabrication of composite polymer
electrolyte and a lithium secondary
battery comprising the composite polymer
electrolyte
INVENTOR(S): Yun, Kyung Suk; Cho, Byung Won; Jo, Seong Mu; Lee,
Wha Seop; Cho, Won Il; Park, Kun You; Kim, Hyung
Sun; Kim, Un Seok; Ko, Seok Ku; Choi, Sung Won
PATENT ASSIGNEE(S): Korea Institute of Science and Technology, S.
Korea; Chun, Suk Won

SOURCE: PCT Int. Appl., 37 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001089021	A1	20011122	WO 2000-KR499	20000519
<--				

W: JP, KR, US
 PRIORITY APPLN. INFO.: WO 2000-KR499 20000519
 <--

ED Entered STN: 23 Nov 2001

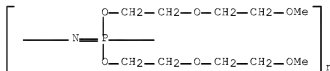
AB The present invention provides a novel composite polymer electrolyte, lithium secondary battery comprising the composite polymer electrolyte and their fabrication methods. More particularly, the present invention provides the composite polymer electrolyte comprising super fine fibrous porous polymer electrolyte matrix with particles having diameter of 1-3000 nm, polymers and lithium salt-dissolved organic electrolyte solns. incorporated into the porous polymer electrolyte matrix. The composite polymer electrolyte of the present invention has advantages of better adhesion with electrodes, good mech. strength, better performance at low and high temps., better compatibility with organic electrolytes of lithium secondary battery and it can be applied to the manufacture of lithium secondary batteries.

IT 98973-15-0

(fabrication of composite polymer electrolyte and lithium secondary battery comprising composite polymer electrolyte)

RN 98973-15-0 HCAPLUS

CN Poly[nitrilo[bis[2-(2-methoxyethoxy)ethoxy]phosphoranylidyne]] (CA INDEX NAME)



IC ICM H01M010-40

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

Section cross-reference(s): 38

ST lithium secondary battery composite polymer electrolyte

IT Battery electrolytes
 Plasticizers

Polymer electrolytes

(fabrication of composite polymer electrolyte and lithium secondary battery comprising composite polymer electrolyte)

IT Fluoropolymers, uses
 Polyoxalykenes, uses

(fabrication of composite polymer electrolyte and lithium secondary battery comprising composite polymer electrolyte)

- electrolyte)
- IT Fluoropolymers, uses
(filling agent; fabrication of composite polymer electrolyte and lithium secondary battery comprising composite polymer electrolyte)
- IT Secondary batteries
(lithium; fabrication of composite polymer electrolyte and lithium secondary battery comprising composite polymer electrolyte)
- IT Alcohols, uses
(plasticizer; fabrication of composite polymer electrolyte and lithium secondary battery comprising composite polymer electrolyte)
- IT Fibers
(spinning, electro-; fabrication of composite polymer electrolyte and lithium secondary battery comprising composite polymer electrolyte)
- IT 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 108-32-7, Propylene carbonate 616-38-6, Dimethyl carbonate 623-53-0, Ethyl methyl carbonate 7782-42-5, Graphite, uses 7791-03-9, Lithium perchlorate 9002-86-2, Pvc 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-20-7, Polyvinyl acetate 9004-34-6, Cellulose, uses 9004-35-7, Cellulose acetate 9004-36-8 9004-39-1, Cellulose acetate propionate 9010-76-8, Acrylonitrile-vinylidene chloride copolymer 9010-88-2, Ethyl acrylate-methyl methacrylate copolymer 9011-14-7, Pmma 9011-17-0, Hexafluoropropylene-vinylidene fluoride copolymer 12190-79-3, Cobalt lithium oxide colio2 14283-07-9, Lithium tetrafluoroborate 21324-40-3, Lithium hexafluorophosphate 24936-67-2, Polyethylene sulfide 24937-79-9, PvdF 25014-41-9, Polyacrylonitrile 25086-89-9, Vinyl acetate-vinylpyrrolidone copolymer 25266-14-2 25322-68-3, Pco 25322-69-4, Polypropylene oxide 25569-53-3, Polyethylene succinate 25721-76-0, Polyethylene glycol dimethacrylate 25749-57-9, Acrylonitrile-methacrylic acid copolymer 26570-48-9, Polyethylene glycol diacrylate 26913-06-4, Poly[imino(1,2-ethanedyl)] 29935-35-1, Lithium hexafluoroarsenate 33454-82-9, Lithium triflate 98973-15-0
(fabrication of composite polymer electrolyte and lithium secondary battery comprising composite polymer electrolyte)
- IT 79-20-9, Methyl acetate 96-48-0, γ -Butyrolactone 105-37-3, Ethyl propionate 109-99-9, Thf, uses 110-71-4, 1,2-Dimethoxyethane 127-19-5, Dimethyl acetamide 141-78-6, Ethyl acetate, uses 554-12-1, Methyl propionate 4437-85-8, Butylene carbonate 12003-67-7, Aluminum lithium oxide alio2
(fabrication of composite polymer electrolyte and lithium secondary battery comprising composite polymer electrolyte)
- IT 554-13-2, Lithium carbonate 1304-28-5, Baria, uses 1309-48-4, Magnesia, uses 1310-65-2, Lithium hydroxide 1313-59-3, Sodium oxide, uses 1344-28-1, Alumina, uses 7631-86-9, Silica, uses 7789-24-4, Lithium fluoride, uses 9002-84-0, Ptfе 12047-27-7, Barium titanium oxide batio3, uses 12057-24-8, Lithia, uses 13463-67-7, Titania, uses 26134-62-3, Lithium nitride li3n
(filling agent; fabrication of composite polymer electrolyte and lithium secondary battery comprising composite polymer electrolyte)
- IT 67-64-1, Acetone, uses 67-68-5, DmsO, uses 68-12-2, Dmf, uses 80-73-9, 1,3-Dimethyl-2-imidazolidinone 143-24-8, Tetraethylene glycol dimethyl ether 872-50-4, n-Methyl-2-pyrrolidone, uses 26101-52-0

(plasticizer; fabrication of composite polymer electrolyte and lithium secondary battery comprising composite polymer electrolyte)

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
 REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 17 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2001:851554 HCAPLUS Full-text

DOCUMENT NUMBER: 135:374193

TITLE: Fabrication method of lithium secondary battery with hybrid polymer electrolyte

INVENTOR(S): Yun, Kyung Suk; Cho, Byung Won; Jo, Seong Mu; Lee, Wha Seop; Cho, Won Il; Park, Kun You; Kim, Hyung Sun; Kim, Un Seok; Ko, Seok Ku; Chun, Suk Won; Choi, Sung Won

PATENT ASSIGNEE(S): Korea Institute of Science and Technology, S. Korea

SOURCE: PCT Int. Appl., 41 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001089020	A1	20011122	WO 2000-KR498	20000519
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W: JP, KR, US				
JP 2003533861	T	20031111	JP 2001-585342	20000519
			<--	
JP 4108981	B2	20080625		
US 20090026662	A1	20090129	US 2008-180509	20080725
			<--	
PRIORITY APPLN. INFO.:			WO 2000-KR498	W 20000519
			<--	
			US 2003-276878	B3 20030522

ED Entered STN: 23 Nov 2001

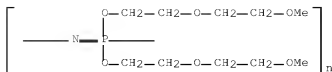
AB The present invention provides a novel hybrid polymer electrolyte, a lithium secondary battery comprising the hybrid polymer electrolyte polymer and their fabrication methods. More particularly, the present invention provides the hybrid polymer electrolyte comprising superfine fibrous porous polymer matrix with particles having diameter of 1-3000 nm, polymers and lithium salt-dissolved organic electrolyte solns. incorporated into the porous polymer matrix. The hybrid polymer electrolyte has advantages of better adhesion with electrodes, good mech. strength, better performance at low and high temps., better compatibility with organic electrolytes of a lithium secondary battery and it can be applied to the manufacture of lithium secondary batteries.

IT 98973-15-0

(fabrication method of lithium secondary battery with hybrid polymer electrolyte)

RN 98973-15-0 HCAPLUS

CN Poly[nitrilo[bis(2-(2-methoxyethoxy)ethoxy)phosphoranylidyne]] (CA INDEX NAME)



- IC ICM H01M010-40
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 Section cross-reference(s): 38
 ST lithium secondary battery hybrid polymer electrolyte
 IT Battery electrolytes
 Plasticizers
 Polymer electrolytes
 (fabrication method of lithium secondary battery with hybrid polymer electrolyte)
 IT Fluoropolymers, uses
 Polyoxalkylenes, uses
 (fabrication method of lithium secondary battery with hybrid polymer electrolyte)
 IT Fluoropolymers, uses
 (filling agent; fabrication method of lithium secondary battery with hybrid polymer electrolyte)
 IT Secondary batteries
 (lithium; fabrication method of lithium secondary battery with hybrid polymer electrolyte)
 IT Alcohols, uses
 (plasticizer; fabrication method of lithium secondary battery with hybrid polymer electrolyte)
 IT Fibers
 (spinning, electro-; fabrication method of lithium secondary battery with hybrid polymer electrolyte)
 IT 79-20-9, Methyl acetate 96-48-0, γ -Butyrolactone 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 108-32-7, Propylene carbonate 109-99-9, Thf, uses 110-71-4, 1,2-Dimethoxyethane 127-19-5, Dimethyl acetamide 141-78-6, Ethyl acetate, uses 554-12-1, Methyl propionate 616-38-6, Dimethyl carbonate 623-53-0, Ethylmethyl carbonate 4437-85-8, Butylene carbonate 7782-42-5, Graphite, uses 7791-03-9, Lithium perchlorate 9002-86-2, Pvc 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-20-7, Polyvinyl acetate 9004-34-6, Cellulose, uses 9004-35-7, Cellulose acetate 9004-36-8 9004-39-1, Cellulose acetate propionate 9010-76-8, Acrylonitrile-vinylidene chloride copolymer 9010-88-2, Ethyl acrylate-methyl methacrylate copolymer 9011-14-7, Pmma 9011-17-0, Hexafluoropropylene-vinylidene fluoride copolymer 12190-79-3, Cobalt lithium oxide colio2 14283-07-9, Lithium tetrafluoroborate 21324-40-3, Lithium hexafluorophosphate 24937-79-9, PvdF 24980-34-5, Polyethylene sulfide 25014-41-9, Polyacrylonitrile 25086-89-9 25266-14-2, Oxyethylene-oxymethylene copolymer 25322-68-3, PEO 25322-69-4, Polypropylene oxide 25569-53-3, Polyethylene succinate 25721-76-0, Polyethylene glycol dimethacrylate 25749-57-9, Acrylonitrile-methacrylic acid copolymer 26570-48-9, Polyethylene glycol diacrylate 26913-06-4, Poly[imino(1,2-ethanedyl)] 29935-35-1, Lithium hexafluoroarsenate 33454-82-9, Lithium triflate 98973-15-0

10/617,811

(fabrication method of lithium secondary battery with hybrid polymer electrolyte)

IT 554-13-2, Lithium carbonate 1304-28-5, Baria, uses 1309-48-4, Magnesia, uses 1310-65-2, Lithium hydroxide 1313-59-3, Sodiumoxide, uses 1344-28-1, Alumina, uses 7631-86-9, Silica, uses 7789-24-4, Lithium fluoride, uses 9002-84-0, Ptfе 12003-67-7, Aluminum lithium oxide allio2 12047-27-7, Barium titanium oxide batio3, uses 12057-24-8, Lithia, uses 13463-67-7, Titania, uses 26134-62-3, Lithium nitride li3n
(filling agent; fabrication method of lithium secondary battery with hybrid polymer electrolyte)
IT 67-64-1, Acetone, uses 67-68-5, Dmsо, uses 68-12-2, Dmf, uses 80-73-9, 1,3-Dimethyl-2-imidazolidinone 143-24-8, Tetraethylene glycol dimethyl ether 872-50-4, n-Methyl-2-pyrrolidone, uses 26101-52-0

(plasticizer; fabrication method of lithium secondary battery with hybrid polymer electrolyte)

OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 18 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2001:840790 HCAPLUS Full-text

DOCUMENT NUMBER: 135:374144

TITLE: Nickel/hydrogen battery

INVENTOR(S): Maeda, Reizo; Harada, Yasuyuki; Tanaka, Tadayoshi; Niijama, Katsuhiko; Matsura, Yoshinori; Noma, Toshiyuki; Yonetsu, Ikuo

PATENT ASSIGNEE(S): Sanyo Electric Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001319684	A	20011116	JP 2000-136799	20000510
			<--	
JP 4079573	B2	20080423		
PRIORITY APPLN. INFO.:			JP 2000-136799	20000510
			<--	

ED Entered STN: 19 Nov 2001

AB The battery contains a phosphate ester and/or a phosphonate ester. The ester may exist in the battery anode or electrolyte.

IT 762-04-9, Di ethyl phosphonate 26912-43-6
(phosphate ester and phosphonate ester additives in electrolyte solns. and anodes for nickel/hydrogen batteries)

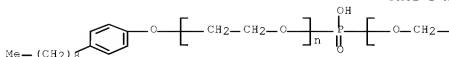
RN 762-04-9 HCAPLUS

CN Phosphonic acid, diethyl ester (CA INDEX NAME)

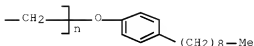


RN 26912-43-6 HCAPLUS
 CN Poly(oxy-1,2-ethanediyl), α, α' -phosphinocobis[ω -(4-nonylphenoxy)- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



IC ICM H01M010-30
 ICS H01M010-30; H01M004-24; H01M004-62
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 ST nickel hydrogen battery ester additive; anode ester additive nickel hydrogen battery; electrolyte ester additive nickel hydrogen battery; phosphate ester additive nickel hydrogen battery; phosphonate ester additive nickel hydrogen battery
 IT Battery electrolytes
 (electrolyte solns. containing phosphate ester and phosphonate ester additives for nickel/hydrogen batteries)
 IT Battery anodes
 (hydrogen absorbing alloy anodes containing phosphate ester and phosphonate ester additives in nickel batteries)
 IT Secondary batteries
 (phosphate ester and phosphonate ester additives in electrolyte solns. and anodes for nickel/hydrogen batteries)
 IT 1310-58-3, Potassium hydroxide, uses
 (electrolyte solns. containing phosphate ester and phosphonate ester additives for nickel/hydrogen batteries)
 IT 1333-74-0, Hydrogen, uses 151974-13-9
 (hydrogen absorbing alloy anodes containing phosphate ester and phosphonate ester additives in nickel batteries)
 IT 126-73-8, Tributyl phosphate, uses 512-56-1, Trimethyl phosphate 762-04-9, Diethyl phosphonate 838-85-7, Diphenyl phosphate 1623-19-4, Triallyl phosphate 1809-19-4, Dibutyl phosphonate 2197-63-9, Dihexadecyl phosphate 7423-32-7, Phosphoric acid monododecyl ester disodium salt 17176-77-1, Dibenzyl phosphonate 21302-09-0 26444-49-5, Cresyl diphenyl phosphate

26912-43-6 37310-83-1, Oleyl phosphate
(phosphate ester and phosphonate ester additives in
electrolyte solns. and anodes for nickel/hydrogen
batteries)

L45 ANSWER 19 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2001:771032 HCAPLUS [Full-text](#)
DOCUMENT NUMBER: 135:320499
TITLE: Separators for electrochemical cells
INVENTOR(S): Carlson, Steven A.; Ying, Qicong; Deng, Zhongyi;
Skotheim, Terje A.
PATENT ASSIGNEE(S): Moltech Corporation, USA
SOURCE: U.S., 18 pp., Cont.-in-part of U.S. 6,153,337.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 6306545	B1	20011023	US 1998-215112	19981217
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US 6153337	A	20001128	US 1997-995089	19971219
			<--	
US 20020092155	A1	20020718	US 2001-40651	20011022
			<--	
PRIORITY APPLN. INFO.:			US 1997-995089	A2 19971219
			<--	
			US 1998-215112	A1 19981217
			<--	

ED Entered STN: 24 Oct 2001

AB This invention pertains to separators for electrochem. cells which comprise a microporous pseudo-boehmite layer; electrolyte elements comprising such separators; elec. current producing cells comprising such separators; and methods of making such separators, electrolyte elements and cells.

IT 211431-21-9, Escure kto

(separators for electrochem. cells)

RN 211431-21-9 HCAPLUS

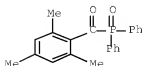
CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer, mixt. with diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide, (4-methylphenyl)phenylmethanone and phenyl(2,4,6-trimethylphenyl)methanone (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 1

CRN 75980-60-8

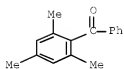
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CM 2

CRN 954-16-5

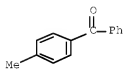
CMF C16 H16 O



CM 3

CRN 134-84-9

CMF C14 H12 O



CM 4

CRN 115055-18-0

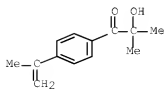
CMF (C13 H16 O2) x

CCI PMS

CM 5

CRN 101649-40-5

CMF C13 H16 O2



IC ICM H01M002-16

ICS C04B035-10

INCL 429247000

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 Section cross-reference(s): 38, 72

ST separator electrochem cell; battery separator microporous
 pseudoboehmite layer

IT Conducting polymers
 Crosslinking agents
 Crosslinking catalysts
 Dispersing agents
 Pigments, nonbiological
 Plasticizers
 Porosity
 Secondary batteries
 Secondary battery separators
 Surfactants
 (separators for electrochem. cells)

IT 57-55-6, Propylene glycol, uses 64-17-5, Ethanol, uses 67-56-1,
 Methanol, uses 67-63-0, Isopropanol, uses 71-23-8, 1-Propanol,
 uses 71-36-3, 1-Butanol, uses 78-92-2, 2-Butanol 107-21-1,
 Ethylene glycol, uses 109-86-4, 2-Methoxyethanol 110-80-5,
 2-Ethoxyethanol 111-76-2, 2-Butoxyethanol 7732-18-5, Water, uses
 25038-59-9, Melinex 516, uses 211431-21-9, Escure kto
 221629-51-2, CN984
 (separators for electrochem. cells)

OS.CITING REF COUNT: 13 THERE ARE 13 CAPLUS RECORDS THAT CITE THIS
 RECORD (13 CITINGS)

REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE
 RE FORMAT

L45 ANSWER 20 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2001:614280 HCAPLUS Full-text

DOCUMENT NUMBER: 135:168869

TITLE: Protective coating for separators for
 electrochemical cells

INVENTOR(S): Ying, Qicong; Carlson, Steven A.; Skotheim, Terje
 A.

PATENT ASSIGNEE(S): Moltech Corporation, USA

SOURCE: U.S., 29 pp., Cont.-in-part of U.S. 6,183,901.
 CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 6277514	B1	20010821	US 1999-447901	19991123
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US 6194098	B1	20010227	US 1998-215029	19981217
			<--	
US 6183901	B1	20010206	US 1999-399967	19990921
			<--	
WO 2000036670	A1	20000622	WO 1999-US30136	19991216
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W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR,			
	CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU,			
	ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,			
	LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU,			
	SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ,			
	VN, YU, ZA, ZW			

10/617,811

RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF,
BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

WO 2000036671 A1 20000622 WO 1999-US30214 19991216

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W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,
CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID,
IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU,
LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD,
SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,
YU, ZA, ZW

RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF,
BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1149425 A1 20011031 EP 1999-967395 19991216

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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,
PT, IE, SI, LT, LV, FI, RO

EP 1151486 A1 20011107 EP 1999-966420 19991216

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EP 1151486 B1 20030521

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,
PT, IE, SI, LT, LV, FI, RO

JP 2002532852 T 20021002 JP 2000-588826 19991216

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CN 1173424 C 20041027 CN 1999-815869 19991216

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CN 1175505 C 20041110 CN 1999-815868 19991216

<--

US 20010053475 A1 20011220 US 2001-898884 20010702

<--

PRIORITY APPLN. INFO.: US 1998-215029 A2 19981217

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US 1999-399967 A2 19990921

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US 1999-447901 A2 19991123

<--

WO 1999-US30136 W 19991216

<--

WO 1999-US30214 W 19991216

<--

ED Entered STN: 23 Aug 2001

AB This invention pertains to separators for use in electrochem. cells which
comprise at least one microporous pseudo-boehmite layer, which separator is in
contact with at least one protective coating layer positioned on the anode-
facing side of the separator opposite from the cathode active layer in the
cell; electrolyte elements comprising such separators; elec. current producing
cells comprising such separators; and methods of making such separators,
electrolyte elements and cells.

IT 211431-21-9, Escure kto
(protective coating for separators for electrochem. cells)

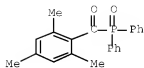
RN 211431-21-9 HCAPLUS

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-,
homopolymer, mixt. with diphenyl(2,4,6-trimethylbenzoyl)phosphine
oxide, (4-methylphenyl)phenylmethanone and
phenyl(2,4,6-trimethylphenyl)methanone (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CRN 75980-60-8

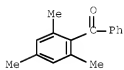
CMF C22 H21 O2 P



CM 2

CRN 954-16-5

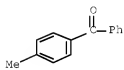
CMF C16 H16 O



CM 3

CRN 134-84-9

CMF C14 H12 O



CM 4

CRN 115055-18-0

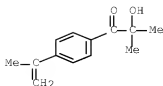
CMF (C13 H16 O2) x

CCI PMS

CM 5

CRN 101649-40-5

CMF C13 H16 O2



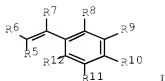
IC ICM H01M002-14
 INCL 429129000
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 Section cross-reference(s): 38
 ST battery separator pseudoboehmite protective coating
 IT Coating process
 Conducting polymers
 Secondary batteries
 Secondary battery separators
 (protective coating for separators for electrochem. cells)
 IT 9003-19-4, Polyvinyl ether 9003-39-8, polyvinylpyrrolidone
 9003-63-8, Poly(butyl methacrylate) 10377-52-3, Lithium phosphate
 12627-14-4, Lithium silicate 12676-27-6 25067-58-7, Polyacetylene
 25190-62-9, Poly(p-phenylene) 28774-98-3, Poly(naphthalene-2,6-diyl)
 37220-89-6, Lithium aluminate 39302-37-9, Lithium titanium oxide
 82451-56-7, Polyazulene 96638-49-2, Poly(phenylenevinylene)
 114239-80-4, Poly(perinaphthalene) 146701-60-2, CAB-O-SIL TS-530
 152747-89-2, Lanthanum lithium oxide 184905-46-2, Lithium nitrogen
 phosphorus oxide 211431-21-9, Escure kto 236388-73-1,
 Lithium silicide sulfide 236388-74-2, Lithium boride sulfide
 236388-75-3, Aluminum lithium sulfide 236388-76-4, Lithium phosphide
 sulfide 342379-43-5, Germanium lithium sulfide
 (protective coating for separators for electrochem. cells)
 OS.CITING REF COUNT: 9 THERE ARE 9 CAPLUS RECORDS THAT CITE THIS
 RECORD (9 CITINGS)
 REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE
 RE FORMAT

 L45 ANSWER 21 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2001:479823 HCAPLUS Full-text
 DOCUMENT NUMBER: 135:83350
 TITLE: Hyperbranched polymers, their preparation, solid
 electrolytes therefrom, and
 electrochemical apparatus therewith
 INVENTOR(S): Sato, Masahiro; Tanba, Atsushi; Osawa, Toshiyuki;
 Oshima, Kentaro
 PATENT ASSIGNEE(S): Kansai Research Institute Inc., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2001181352	A	20010703	JP 1999-371750	19991227
<--				

ED Entered STN: 03 Jul 2001

GI



AB The polymers, showing high ion conductivity and solid strength, are prepared by polymerization of $R_1R_2C:CR_3CO_2(CH_2CH_2O)_nR_4$ ($R_1-3 = H$, C_1-4 alkyl; $R_4 = H$, C_1-4 alkyl, C_1-4 acyl; $n = 1-20$ integer), I ($R_5-7 = H$, C_1-4 alkyl; $R_8-12 = H$, halo, C_1-4 (halo)alkyl, where ≥ 1 of them is C_1-4 α -haloalkyl), and optional $R_13R_14C:CR_15CO_2(CH_2CH_2O)_mP(:O)(OH)_2$ ($R_13-15 = H$, C_1-4 alkyl; $m = 1-20$ integer). The polymers may be crosslinked with acrylic and/or styrenic crosslinkers. The polymers may be subjected to living radical polymerization offering dendritic graft polymers and may be cation exchanged with Li giving solid electrolytes for Li secondary batteries.

IT 347188-26-5DP, Li complexes
(dendritic; polyethylene-branched hyperbranched graft polymers for high-ion-conductivity battery electrolytes)

RN 347188-26-5 HCAPLUS

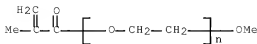
CN 2-Propenoic acid, 2-methyl-, 2-(phosphonooxy)ethyl ester, polymer with 1-(chloromethyl)-4-ethenylbenzene and α -(2-methyl-1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 26915-72-0

CMF (C2 H4 O) $_n$ C5 H8 O2

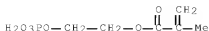
CCI PMS



CM 2

CRN 24599-21-1

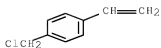
CMF C6 H11 O6 P



CM 3

CRN 1592-20-7

CMF C9 H9 Cl



IT 347188-28-7DP, Li complexes

(graft; polyethylene-branched hyperbranched graft polymers for high-ion-conductivity battery electrolytes)

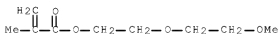
RN 347188-28-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(2-methoxyethoxy)ethyl ester, polymer with 1-(chloromethyl)-4-ethenylbenzene, 4-ethenylbenzenesulfonic acid and 2-(phosphonooxy)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 45103-58-0

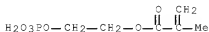
CMF C9 H16 O4



CM 2

CRN 24599-21-1

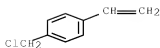
CMF C6 H11 O6 P



CM 3

CRN 1592-20-7

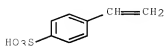
CMF C9 H9 Cl



CM 4

CRN 98-70-4

CMF C8 H8 O3 S



- IC ICM C08F220-28
ICS C08F004-10; C08F212-04; H01G009-028; H01M010-40
- CC 72-3 (Electrochemistry)
Section cross-reference(s): 38, 52, 76
- ST lithium battery electrolyte ion cond strength;
dendritic polyethylene branching polymer battery
electrolyte
- IT Crosslinking agents
(acrylic and/or styrenic; polyethylene-branched hyperbranched graft
polymers for high-ion-conductivity battery electrolytes
)
- IT Polyoxoalkylenes, uses
(acrylic, graft, dendritic, Li complexes; polyethylene-branched
hyperbranched graft polymers for high-ion-conductivity battery
electrolytes)
- IT Electric apparatus
(electrochem.; polyethylene-branched hyperbranched graft polymers
for high-ion-conductivity battery electrolytes)
- IT Polymerization
(graft, living radical; polyethylene-branched hyperbranched graft
polymers for high-ion-conductivity battery electrolytes
)
- IT Dendritic polymers
(graft; polyethylene-branched hyperbranched graft polymers for
high-ion-conductivity battery electrolytes)
- IT Secondary batteries
(lithium; polyethylene-branched hyperbranched graft polymers for
high-ion-conductivity battery electrolytes)
- IT Polymerization
(living, radical, graft; polyethylene-branched hyperbranched graft
polymers for high-ion-conductivity battery electrolytes
)
- IT Battery electrolytes
Solid electrolytes
(polyethylene-branched hyperbranched graft polymers for
high-ion-conductivity battery electrolytes)
- IT 152253-76-4DP, Li complexes 347188-26-5DP, Li complexes
347188-27-6DP, Li complexes

(dendritic; polyethylene-branched hyperbranched graft polymers for high-ion-conductivity **battery electrolytes**)

IT 347188-28-7DP, Li complexes
(graft; polyethylene-branched hyperbranched graft polymers for high-ion-conductivity **battery electrolytes**)

IT 553-26-4D, 4,4'-Bipyridyl, complexes with copper chloride
7758-89-6D, Copper(I) chloride, bipyridyl complexes
(living radical polymerization catalysts; polyethylene-branched hyperbranched graft polymers for high-ion-conductivity **battery electrolytes**)

IT 7439-93-2DP, Lithium, polyoxyethylene-branch-bearing dendritic polymer complexes, uses
(polyethylene-branched hyperbranched graft polymers for high-ion-conductivity **battery electrolytes**)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L45 ANSWER 22 OF 40 HCAPLUS COPYRIGHT 2009 ACS ON STN

ACCESSION NUMBER:

2001:91433 HCAPLUS Full-text

DOCUMENT NUMBER:

134:134106

TITLE:

Protective coating for separators for electrochemical cells

INVENTOR(S):

Ying, Qicong; Carlson, Steven A.; Skotheim, Terje A.

PATENT ASSIGNEE(S):

Moltech Corporation, USA

SOURCE:

U.S., 27 pp., Cont.-in-part of U.S. Ser. No. 215,029.

CODEN: USXXAM

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6183901	B1	20010206	US 1999-399967	19990921
			<--	
US 6194098	B1	20010227	US 1998-215029	19981217
			<--	
US 6277514	B1	20010821	US 1999-447901	19991123
			<--	
WO 2000036670	A1	20000622	WO 1999-US30136	19991216
			<--	
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
WO 2000036671	A1	20000622	WO 1999-US30214	19991216
			<--	
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW			

10/617,811

RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF,
BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
EP 1149425 A1 20011031 EP 1999-967395 19991216
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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,
PT, IE, SI, LT, LV, FI, RO
EP 1151486 A1 20011107 EP 1999-966420 19991216
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EP 1151486 B1 20030521
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,
PT, IE, SI, LT, LV, FI, RO
JP 2002532852 T 20021002 JP 2000-588826 19991216
<--
CN 1173424 C 20041027 CN 1999-815869 19991216
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CN 1175505 C 20041110 CN 1999-815868 19991216
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US 6410182 B1 20020625 US 2000-641539 20000818
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US 20010000485 A1 20010426 US 2000-727160 20001130
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US 6423444 B2 20020723
US 20010053475 A1 20011220 US 2001-898884 20010702
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PRIORITY APPLN. INFO.:

US 1998-215029 A2 19981217
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US 1999-399967 A2 19990921
<--
US 1999-447901 A2 19991123
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WO 1999-US30136 W 19991216
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WO 1999-US30214 W 19991216
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ED Entered STN: 07 Feb 2001

AB This invention pertains to separators for electrochem. cells which comprise
(i) two microporous pseudo-boehmite layers and (ii) a protective coating layer
comprising a polymer interposed between the microporous pseudo-boehmite
layers; electrolyte elements comprising such separators; elec. current
producing cells comprising such separators; and methods of making such
separators, electrolyte elements and cells.

IT 211431-21-9, Escure KTO
(photosensitizer; protective coating for separators for
electrochem. cells)

RN 211431-21-9 HCAPLUS

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-,
homopolymer, mixt. with diphenyl(2,4,6-trimethylbenzoyl)phosphine
oxide, (4-methylphenyl)phenylmethanone and
phenyl(2,4,6-trimethylphenyl)methanone (CA INDEX NAME)

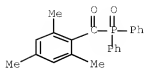
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 1

CRN 75980-60-8

CMF C22 H21 O2 P

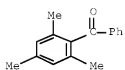
10/617,811



CM 2

CRN 954-16-5

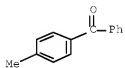
CMF C16 H16 O



CM 3

CRN 134-84-9

CMF C14 H12 O



CM 4

CRN 115055-18-0

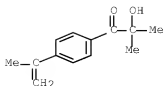
CMF (C13 H16 O2) x

CCI PMS

CM 5

CRN 101649-40-5

CMF C13 H16 O2

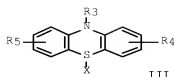


IC ICM H01M002-14
ICS H01M002-16
INCL 429129000
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38
ST battery separator pseudoboehmite protective coating
IT Coating materials
Pigments, nonbiological
Primary battery separators
Secondary battery separators
(protective coating for separators for electrochem. cells)
IT 211431-21-9, Escure KTO
(photosensitizer; protective coating for separators for
electrochem. cells)
OS.CITING REF COUNT: 11 THERE ARE 11 CAPLUS RECORDS THAT CITE THIS
RECORD (11 CITINGS)
REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN THE
RE FORMAT

L45 ANSWER 23 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2001:62800 HCAPLUS Full-text
DOCUMENT NUMBER: 134:134086
TITLE: Nonaqueous electrolyte batteries
INVENTOR(S): Fui, Samu; Tomita, Takashi; Segawa, Takeshi
PATENT ASSIGNEE(S): Sony Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001023687	A	20010126	JP 1999-196532	19990709
			<--	
PRIORITY APPLN. INFO.:			JP 1999-196532	19990709
			<--	

OTHER SOURCE(S): MARPAT 134:134086
ED Entered STN: 26 Jan 2001
GI



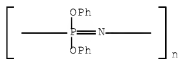
AB Secondary Li batteries have a nonaq. electrolyte solution containing a phosphazene I [R1 and R2 = linear or branched (substituted) alkyl, (substituted) cyclic alkyl, (substituted) alkylene, or (substituted) alkylene oxide groups; n = integer 1-100] and a radical polymerization inhibitor. The phosphazene may be cyclic compound II (m = integer 3-10), and the radical polymerization inhibitor is preferably a S and N containing heterocyclic compound, e.g., III [R3-5 = H, linear or branched (substituted) alkyl, (substituted) cyclic alkyl, (substituted) alkylene, or (substituted), and X = 0-2 atoms].

IT 28212-48-8 28779-94-4 40081-32-1
60495-46-7, Poly[nitrilo(diethoxyphosphoranylidene)]
98973-15-0 321734-64-9

(electrolyte solns. containing phosphazanes and heterocyclic radical polymerization inhibitors for secondary lithium batteries)

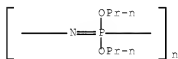
RN 28212-48-8 HCAPLUS

CN Poly[nitrilo(diphenoxyphosphoranylidene)] (CA INDEX NAME)



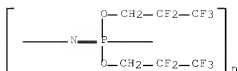
RN 28779-94-4 HCAPLUS

CN Poly[nitrilo(dipropoxyphosphoranylidene)] (9CI) (CA INDEX NAME)



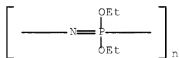
RN 40081-32-1 HCAPLUS

CN Poly[nitrilo[bis(2,2,3,3,3-pentafluoropropoxy)phosphoranylidene]]
(9CI) (CA INDEX NAME)



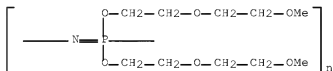
RN 60495-46-7 HCAPLUS

CN Poly[nitrilo(diethoxyphosphoranylidyne)] (9CI) (CA INDEX NAME)



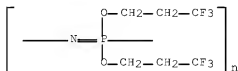
RN 98973-15-0 HCAPLUS

CN Poly[nitrilo[bis[2-(2-methoxyethoxy)ethoxy]phosphoranylidyne]] (CA INDEX NAME)



RN 321734-64-9 HCAPLUS

CN Poly[nitrilo[bis(3,3,3-trifluoropropoxy)phosphoranylidyne]] (9CI) (CA INDEX NAME)



IC ICM H01M010-40

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

ST secondary lithium battery electrolyte phosphazene
polymn inhibitor; heterocyclic nitrogen sulfur compd lithium
battery electrolyteIT Battery electrolytes
(electrolyte solns. containing phosphazanes and heterocyclic
radical polymerization inhibitors for secondary lithium batteries
)

10/617,811

IT 108-32-7, Propylene carbonate 616-38-6, Dimethyl carbonate
(electrolyte solns. containing phosphazanes and heterocyclic
radical polymerization inhibitors for secondary lithium batteries
)
IT 92-84-2, 10H-Phenothiazine 429-16-3 429-18-5 992-79-0
1207-72-3 1209-66-1 1256-55-9 5116-77-8 28212-48-8
28779-94-4 36409-59-3 40081-32-1 58378-20-4
60495-46-7, Poly[nitrilo(diethoxyphosphoranylidene)]
98973-15-0 320618-62-0 320618-63-1 321734-64-9
321734-65-0
(electrolyte solns. containing phosphazanes and heterocyclic
radical polymerization inhibitors for secondary lithium batteries
)

OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS
RECORD (3 CITINGS)

L45 ANSWER 24 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2001:12793 HCAPLUS Full-text

DOCUMENT NUMBER: 134:74037

TITLE: Improved lithium ion polymer electrolytes
and methods of manufacturing an electrochemical
cell

INVENTOR(S): Munshi, M. Zafar A.

PATENT ASSIGNEE(S): Lithium Power Technologies, Inc., USA

SOURCE: PCT Int. Appl., 43 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

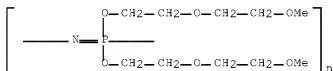
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001001507	A1	20010104	WO 2000-US16294	20000626
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W: AU, BR, CA, CN, ID, IL, IN, JP, KR, MX, SG, VN				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC,				
NL, PT, SE				
US 6413676	B1	20020702	US 1999-340944	19990628
<--				
JP 2003503822	T	20030128	JP 2001-506631	20000626
<--				
US 20030091904	A1	20030515	US 2002-187483	20020702
<--				
US 6828065	B2	20041207		
US 20040151985	A1	20040805	US 2002-188339	20020702
<--				
PRIORITY APPLN. INFO.:			US 1999-340944	A 19990628
<--				
			WO 2000-US16294	W 20000626
<--				

ED Entered STN: 05 Jan 2001

AB A dimensionally stable, highly resilient, hybrid copolymer solid-solution
electrolyte-retention film for use in a lithium ion battery in one preferred
embodiment has a predominantly amorphous structure and mech. strength despite
contact with liquid solvent electrolyte. The film is a thinned (stretched),
cast film of a homogeneous blend of two or more polymers, one of which is
selected for its pronounced solvent retention properties. A very high surface
area inorg. filler dispersed in the blend during formation thereof serves to
increase the porosity of the film and thereby enhance electrolyte retention.

The film is soaked in a solution of liquid polymer with liquid organic solvent electrolyte and lithium salt, for absorption thereof. Use of a crosslinked liquid polymer enhances trapping of mols. of the electrolyte into pores of the film. The electrolyte film is sandwiched between flexible active anode and cathode layers to form the lithium ion battery. Novel methods are provided for forming the electrodes, the polymer substrate, and other elements of the battery.

IT 98973-15-6
 (improved lithium ion polymer electrolytes and methods of
 manufacturing electrochem. cell)
 RN 98973-15-0 HCAPLUS
 CN Poly[nitrilo[bis[2-(2-methoxyethoxy)ethoxy]phosphoranylidyne]] (CA
 INDEX NAME)



IC ICM HQ1M006-18
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy
 Technology)
 Section cross-reference(s): 38
 ST battery lithium ion polymer electrolyte
 IT Conducting polymers
 (Li-doped; improved lithium ion polymer electrolytes and
 methods of manufacturing electrochem. cell)
 IT Polyacetylenes, uses
 Polyanilines
 (Li-doped; improved lithium ion polymer electrolytes and
 methods of manufacturing electrochem. cell)
 IT Battery electrolytes
 Electron beams
 Polymer electrolytes
 UV radiation
 (improved lithium ion polymer electrolytes and methods of
 manufacturing electrochem. cell)
 IT Acrylic polymers, uses
 Fluoropolymers, uses
 Polycarbonates, uses
 Polyesters, uses
 Polyoxalkylenes, uses
 Polysiloxanes, uses
 Polythiophenylenes
 (improved lithium ion polymer electrolytes and methods of
 manufacturing electrochem. cell)
 IT Secondary batteries
 (lithium; improved lithium ion polymer electrolytes and
 methods of manufacturing electrochem. cell)
 IT Polyoxalkylenes, uses
 (oxymethylene-linked; improved lithium ion polymer
 electrolytes and methods of manufacturing electrochem. cell)
 IT Urethanes
 (trifunctional, crosslinking agent; improved lithium ion polymer
 electrolytes and methods of manufacturing electrochem. cell)

- IT 25067-58-7, Polyacetylene 25233-30-1, Polyaniline 30604-81-0, Polypyrrole
(Li-doped; improved lithium ion polymer electrolytes and methods of manufacturing electrochem. cell)
- IT 7631-86-9, Fumed silica, uses
(colloidal, filler; improved lithium ion polymer electrolytes and methods of manufacturing electrochem. cell)
- IT 7429-90-5, Aluminum, uses 7440-02-0, Nickel, uses 7440-50-8, Copper, uses 7440-66-6, Zinc, uses 12597-68-1, Stainless steel, uses
(current collector; improved lithium ion polymer electrolytes and methods of manufacturing electrochem. cell)
- IT 1344-28-1, Alumina, uses
(filler; improved lithium ion polymer electrolytes and methods of manufacturing electrochem. cell)
- IT 1332-29-2, Tin oxide 7440-44-0D, Carbon, intercalation compds., uses 9002-84-0, Ptfе 9003-07-0, Polypropylene 9003-11-6, Ethylene oxide-propylene oxide copolymer 9011-14-7, Pmma 11126-15-1, Lithium vanadium oxide 12057-17-9, Lithium manganese oxide LiMn2O4 12423-04-0, Lithium vanadium oxide LiV3O8 24937-79-9, PvdF 24968-11-4, Polyethylene naphthalate 25014-41-9, Polyacrylonitrile 25038-59-9, Polyethylene terephthalate, uses 25067-61-2, Polymethacrylonitrile 25230-87-9 25322-68-3, Pco 25322-68-3D, Pco, oxymethylene-linked 30871-57-9, Propylene-vinylidene fluoride copolymer 39300-70-4, Lithium nickel oxide 39457-42-6, Lithium manganese oxide 52627-24-4, Cobalt lithium oxide 61673-65-2, Lithium niobium selenide 74245-06-0, Lithium vanadium sulfide 98973-15-0 98973-15-0, Meep 131344-56-4, Cobalt lithium nickel oxide 162684-16-4, Lithium manganese nickel oxide 214536-41-1, Cobalt lithium manganese oxide
(improved lithium ion polymer electrolytes and methods of manufacturing electrochem. cell)
- IT 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 108-32-7, Propylene carbonate 616-38-6, Dimethyl carbonate 7791-03-9, Lithium perchlorate 14024-11-4, Lithium tetrachloroaluminate 14283-07-9, Lithium tetrafluoroborate 21324-40-3, Lithium hexafluorophosphate 29935-35-1, Lithium hexafluoroarsenate 33454-82-9, Lithium triflate 90076-65-6, Lithium bis(trifluoromethanesulfonyl)imide 132404-42-3
(improved lithium ion polymer electrolytes and methods of manufacturing electrochem. cell)

OS.CITING REF COUNT: 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 25 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2000:881475 HCAPLUS Full-text

DOCUMENT NUMBER: 134:44550

TITLE: Methods of preparing electrochemical cells

INVENTOR(S): Carlson, Steven A.

PATENT ASSIGNEE(S): Moltech Corporation, USA

SOURCE: PCT Int. Appl., 83 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000076014	A2	20001214	WO 2000-US15971	20000609
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WO 2000076014	A3	20010927		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BT, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
EP 1214748	A2	20020619	EP 2000-942731	20000609
			<--	
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL			
US 6488721	B1	20021203	US 2000-590458	20000609
			<--	
US 6497780	B1	20021224	US 2000-590457	20000609
			<--	
US 20030118910	A1	20030626	US 2002-325074	20021220
			<--	
US 7160603	B2	20070109		
US 20040185335	A1	20040923	US 2004-767631	20040129
			<--	
US 20070111070	A1	20070517	US 2007-650673	20070108
			<--	
US 20070110990	A1	20070517	US 2007-650674	20070108
			<--	
US 20070108120	A1	20070517	US 2007-650675	20070108
			<--	
PRIORITY APPLN. INFO.:			US 1999-139031P	P 19990609
			<--	
			US 2000-590457	A3 20000609
			<--	
			WO 2000-US15971	W 20000609
			<--	
			US 2002-325074	A1 20021220
			<--	
ED	Entered STN: 15 Dec 2000			
AB	Provided are methods of preparing a cathode/separator assembly for use in electrochem. cells in which a microporous separator layer is coated on a temporary carrier substrate and a cathode active layer is then coated or laminated on the separator layer prior to removing the temporary carrier substrate from the separator layer. The microporous separator layer may comprise one or more microporous xerogel layers. Optionally, the cathode/separator assembly may comprise one or more protective coating layers which are in contact with at least one of the microporous xerogel layers, and one of the protective coating layers may be coated on the temporary carrier substrate prior to coating the separator layer. Also, provided are methods of preparing electrochem. cells utilizing cathode/separator assemblies prepared by such methods, and cathode/separator assemblies and electrochem. cells prepared by such methods.			
IT	211431-21-9, Esacure KTO 46			
	(photosensitizer; methods of preparing electrochem. cells)			
RN	211431-21-9 HCAPLUS			
CN	1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer, mixt. with diphenyl(2,4,6-trimethylbenzoyl)phosphine			

10/617,811

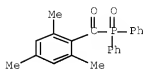
oxide, (4-methylphenyl)phenylmethanone and
phenyl (2,4,6-trimethylphenyl)methanone (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 1

CRN 75980-60-8

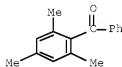
CMF C22 H21 O2 P



CM 2

CRN 954-16-5

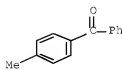
CMF C16 H16 O



CM 3

CRN 134-84-9

CMF C14 H12 O



CM 4

CRN 115055-18-0

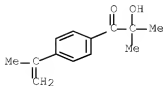
CMF (C13 H16 O2) x

CCI PMS

CM 5

CRN 101649-40-5

CMF C13 H16 O2



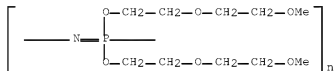
IC ICM H01M002-16
 ICS H01M004-04; H01M004-36
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 Section cross-reference(s): 38
 ST battery cathode separator assembly fabrication
 IT Secondary batteries
 (lithium; methods of preparing electrochem. cells)
 IT Battery cathodes
 Conducting polymers
 Electric insulators
 Paper
 Primary battery separators
 Secondary battery separators
 Xerogels
 (methods of preparing electrochem. cells)
 IT 211431-21-9, Esacure KTO 46
 (photosensitizer; methods of preparing electrochem. cells)
 OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS
 RECORD (3 CITINGS)
 REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE
 RE FORMAT

L45 ANSWER 26 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2000:49109 HCAPLUS Full-text
 DOCUMENT NUMBER: 132:110582
 TITLE: Nonaqueous secondary batteries
 INVENTOR(S): Toniyaama, Hideki
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 21 pp.
 CODEN: JKXXAF

DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

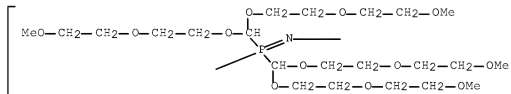
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2000021449	A	20000121	JP 1998-186328	19980701
			<--	
JP 4003298	B2	20071107		
PRIORITY APPLN. INFO.:			JP 1998-186328	19980701
			<--	

ED Entered STN: 21 Jan 2000
 AB The batteries comprise a Li-containing transition metal oxide cathode, a Li-intercalating Si-containing anode, and a electrolyte gel containing (a) organic polymer, (b) non-protonic solvent, and (c) ammonium, alkali metal, or alkaline earth metal salt. The batteries have excellent charge-discharge cycle characteristics.
 IT 98973-15-0 255897-46-2
 (lithium secondary batteries with polymer gel electrolytes)
 RN 98973-15-0 HCAPLUS
 CN Poly[nitrilo[bis[2-(2-methoxyethoxy)ethoxy]phosphoranylidene]] (CA INDEX NAME)



RN 255897-46-2 HCAPLUS
 CN Poly[nitrilo[bis[bis[2-(2-methoxyethoxy)ethoxy]methyl]phosphoranylidene]] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



IC ICM H01M010-40
 ICS H01M010-40; H01M004-02; H01M004-58
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 Section cross-reference(s): 38

ST nonaq secondary battery gel electrolyte;
oxyalkylene vinyl polymer gel electrolyte battery

IT Gels
(electrolyte; lithium secondary batteries with
polymer gel electrolytes)

IT Battery electrolytes
Polymer electrolytes
Secondary batteries
(lithium secondary batteries with polymer gel
electrolytes)

IT Fluoropolymers, uses
Polyoxyalkylenes, uses
(lithium secondary batteries with polymer gel
electrolytes)

IT Polyphosphazenes
Polyphosphazenes
Polysiloxanes, uses
Polysiloxanes, uses
(polyoxyalkylene-, graft, lithium complex; lithium secondary
batteries with polymer gel electrolytes)

IT Polyoxyalkylenes, uses
Polyoxyalkylenes, uses
(polyphosphazene-, graft, lithium complex; lithium secondary
batteries with polymer gel electrolytes)

IT Polyoxyalkylenes, uses
Polyoxyalkylenes, uses
(polysiloxane-, graft, lithium complex; lithium secondary
batteries with polymer gel electrolytes)

IT 7440-02-0, Nickel, uses
(-coated silicon anode; lithium secondary
batteries with polymer gel electrolytes)

IT 7440-21-3, Silicon, uses 7631-86-9, Silica, uses 193072-79-6
(anode; lithium secondary batteries with
polymer gel electrolytes)

IT 12190-79-3, Cobalt lithium oxide (CoLiO₂)
(cathode; lithium secondary batteries with
polymer gel electrolytes)

IT 96-49-1, Ethylene carbonate 108-32-7, Propylene carbonate
(electrolyte solvent; lithium secondary batteries
with polymer gel electrolytes)

IT 21324-40-3, Lithium hexafluorophosphate
(electrolyte; lithium secondary batteries with
polymer gel electrolytes)

IT 9003-11-6, Ethylene oxide-propylene oxide copolymer 9011-17-0
24937-79-9, Poly(vinylidene fluoride) 24968-79-4,
Acrylonitrile-methyl acrylate copolymer 25014-41-9,
Polyacrylonitrile 25067-61-2, Polymethacrylonitrile 25322-68-3
25322-69-4 29613-70-5 50867-60-2, Acrylonitrile-methyl vinyl ether
copolymer 98973-15-0 115401-75-7 255897-37-1
255897-39-3 255897-40-6 255897-42-8 255897-44-0 255897-45-1
255897-46-2 255897-47-3 255897-48-4
(lithium secondary batteries with polymer gel
electrolytes)

L45 ANSWER 27 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN

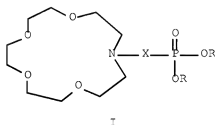
ACCESSION NUMBER: 1999:492147 HCAPLUS Full-text

DOCUMENT NUMBER: 131:243318

TITLE: New type of lariat ethers: synthesis and cation
binding ability of phosphonoalkyl-azacrown ethers

AUTHOR(S): Keglevich, Gyorgy; Novak, Tibor; Bako, Peter;

Ujszaszy, Kalman; Ludanyi, Krisztina; Toth, Klara;
Toke, Laszlo
CORPORATE SOURCE: Department of Organic Chemical Technology,
Technical University of Budapest, Budapest, 1521,
Hung.
SOURCE: Journal of Inclusion Phenomena and Macrocyclic
Chemistry (1999), 34(3), 299-309
CODEN: JIPCF5
PUBLISHER: Kluwer Academic Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 10 Aug 1999
GI

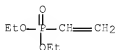


AB The synthesis of azacrown ethers with phosphonoalkyl side chains of two to five carbon atoms, e.g I (R = Et, X = (CH₂)_n, n = 3-5; R = Me, X = (CH₂)₃), potentially useful as a new type of cation binding agent, is described. Introduction of the phosphonoalkyl moiety into the parent monoaza-15-crown-5 decreases the cation extraction ability, but results in an increase in the selectivity towards the cations examined. The effect of the phosphonoalkyl-azacrown ethers on the properties of membranes used in ion-selective electrodes is also reported.

IT 682-30-4P
(synthesis and cation binding ability of new type of lariat phosphonoalkyl-azacrown ethers)

RN 682-30-4 HCAPLUS

CN Phosphonic acid, P-ethenyl-, diethyl ester (CA INDEX NAME)



CC 29-7 (Organometallic and Organometalloidal Compounds)
Section cross-reference(s): 80

IT Extraction
Ion-selective electrodes
Membranes, nonbiological
(synthesis and cation binding ability of new type of lariat phosphonoalkyl-azacrown ethers)

IT 682-30-4P 1186-10-3P 5324-30-1P 42757-42-6P

63075-66-1P 121934-92-7P 177342-84-6P

(synthesis and cation binding ability of new type of lariat phosphonoalkyl-azacrown ethers)

OS.CITING REF COUNT: 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 28 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1999:327017 HCAPLUS Full-text

DOCUMENT NUMBER: 131:7571

TITLE: Electrochemical power-generating elements

INVENTOR(S): Yoshitake, Masahiro; Yoshida, Naoki; Kunisa, Yasuhiro; Shimodaira, Satoshi

PATENT ASSIGNEE(S): Asahi Glass Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11135135	A	19990521	JP 1997-297514	19971029
			<--	
PRIORITY APPLN. INFO.:			JP 1997-297514	19971029
			<--	

ED Entered STN: 27 May 1999

AB The element comprises an ion-exchange membrane made of phosphonic acid group-containing fluorocarbon polymer and containing nonconducting pillar particles, sandwiched between anode and cathode. The structure may be solid electrolyte fuel cells, air-Zn batteries, etc. The ion-exchange membranes can be made thin without causing short circuits.

IT 225667-51-6P 225667-53-6P
(phosphonic acid group-containing fluoropolymers containing pillar particles as ion-exchange membranes in electrochem. power generating elements)

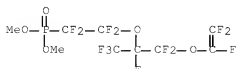
RN 225667-51-6 HCAPLUS

CN Phosphonic acid, P-[2-[1-[difluoro[(1,2,2-trifluoroethenyl)oxy]methyl]-1,2,2,2-tetrafluoroethoxy]-1,1,2,2-tetrafluoroethyl]-, dimethyl ester, polymer with 1,1,2,2-tetrafluoroethene (CA INDEX NAME)

CM 1

CRN 225667-50-5

CMF C9 H6 F13 O5 P



CM 2

CRN 116-14-3

CMF C2 F4



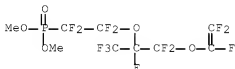
RN 225667-53-8 HCAPLUS

CN Phosphonic acid, [2-[1-[difluoro[(trifluoroethenyl)oxy]methyl]-1,2,2,2-tetrafluoroethoxy]-1,1,2,2-tetrafluoroethyl]-, dimethyl ester, polymer with 1,1,1,2,2,3,3-heptafluoro-3-[(trifluoroethenyl)oxy]propane and tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 225667-50-5

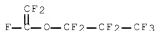
CMF C9 H6 F13 O5 P



CM 2

CRN 1623-05-8

CMF C5 F10 O



CM 3

CRN 116-14-3

CMF C2 F4



IC ICM H01M008-02
 ICS C08L027-12; H01B001-12; H01M004-94; H01M008-10; H01M012-08
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 Section cross-reference(s): 38
 ST fluoropolymer ion exchange membrane fuel cell; phosphonate contg
 fluoropolymer ion exchanger **battery**; pillar particle
 fluoropolymer ion exchanger **battery**; electrochem power
 generation fluoropolymer ion exchanger
 IT Primary **batteries**
 (air-zinc; phosphonic acid group-containing fluoropolymers containing
 pillar particles as ion-exchange membranes in electrochem. power
 generating elements)
 IT 225667-51-6P 225667-53-8P
 (phosphonic acid group-containing fluoropolymers containing pillar
 particles as ion-exchange membranes in electrochem. power
 generating elements)

L45 ANSWER 29 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1999:187781 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 130:198752

TITLE: Study on new system of lithium ion polymer
electrolyte

AUTHOR(S): Yu, Qingchun; Zhu, Qinwei; Miao, Guoxiang; Zhang,
 Rongyu; Wu, Yihua; Wang, Lei

CORPORATE SOURCE: Department of Applied Chemistry, Shanghai Jiao
 Tong University, Shanghai, 200240, Peop. Rep.
 China

SOURCE: Dianyuan Jishu (1999), 23(1), 5-6, 45

CODEN: DIJIFT; ISSN: 1002-087X

PUBLISHER: Dianyuan Jishu Bianjibu

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

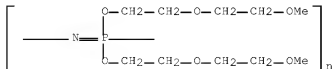
ED Entered STN: 23 Mar 1999

AB Three systems of lithium ion polymer **electrolyte**, i.e. single ion conductor
electrolyte, MEEP and PVA plus plasticizer was studied. Single ion conductor
 could be prepared from grafting sulfonated polyether with polyurethane. With
 conductivity of 10⁻⁴ S/cm at room temperature and Na⁺ transport number of
 0.99, cyclotriphosphazene could improve the mech. strength of MEEP while its
 conductivity became low. Lithium ion polymer **electrolyte** could be prepared by
 adding LiClO₄ to PVA. By adding plasticizer in that system, the conductivity
 was increased due to low tg of polymer.

IT 98973-15-0, Poly(bis-(2-(2-methoxyethoxy)ethoxy)phosphazene)
 (lithium ion **battery** polymer **electrolyte**)

RN 98973-15-0 HCAPLUS

CN Poly[nitrilo[bis[2-(2-methoxyethoxy)ethoxy]phosphoranylidene]] (CA
 INDEX NAME)



CC 52-2 (Electrochemical, Radiational, and Thermal Energy
 Technology)

Section cross-reference(s): 38

ST lithium battery polymer electrolyte
 IT Battery electrolytes
 Electric conductivity
 Polymer electrolytes
 (lithium ion battery polymer electrolyte)
 IT Polyurethanes, uses
 (polyether-, sulfonated; lithium ion battery polymer
 electrolyte)
 IT 7791-03-9, Lithium perchlorate 9002-89-5, Pva 98973-15-0
 , Poly(bis-(2-(2-methoxyethoxy)ethoxy)phosphazene) 98973-15-0
 , Meep
 (lithium ion battery polymer electrolyte)
 IT 291-37-2, Cyclotriphosphazene
 (lithium ion battery polymer electrolyte)

L45 ANSWER 30 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1998:732039 HCAPLUS Full-text

DOCUMENT NUMBER: 130:41354

TITLE: Application of electrochemical impedance
 spectroscopy and surface analysis to the study of
 corrosion protection of carbon steels by
 phosphonates

AUTHOR(S): To, X. T.; Pebere, N.; Pelaprat, N.; Boutevin, B.;
 Hervaud, Y.

CORPORATE SOURCE: Equipe Metallurgie Physique, E.N.S.C.T., ESA CNRS
 5071, Toulouse, F-31077, Fr.

SOURCE: Materials Science Forum (1998),
 289-292(Pt. 2), 1193-1203
 CODEN: MSFOEP; ISSN: 0255-5476

PUBLISHER: Trans Tech Publications Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

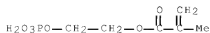
ED Entered STN: 18 Nov 1998

AB The corrosion protection afforded by the surface treatment of C steel in
 solns. containing a monoacid phosphonate (Et octodecyl phosphonate (EODP)) and
 a mixture of phosphates (methacryloxyethyl phosphate (MOP)) bearing 1 or 2
 acid groups and acting as a film-structuring compound, was studied by steady-
 state current-voltage curves and electrochem. impedance measurements using a
 rotating disk electrode. High protection was obtained with the mixture 1% MOP
 and 1% EODP after a 2 h treatment. Surface analyses (Raman and FTIR
 spectroscopy, XPS) indicate that the film was essentially the Fe(EODP)₂
 complex. MOP plays a significant role at the interface as it forms a thin
 oxide layer which improves the development and adherence of the layer formed
 by EODP. Electrochem. impedance measurements obtained after 30 h immersion of
 the treated steel in 0.1 M NaCl solution showed that the C steel surface had
 remained undamaged.

IT 24599-21-1
 (corrosion protection of carbon steels by phosphonates)

RN 24599-21-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(phosphonoxy)ethyl ester (CA INDEX
 NAME)



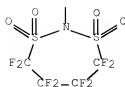
Section cross-reference(s): 72
 IT 12725-37-0, XC35, processes 16165-53-0 24599-21-1
 32435-46-4

(corrosion protection of carbon steels by phosphonates)
 OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS
 RECORD (3 CITINGS)
 REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE
 RE FORMAT

L45 ANSWER 31 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1998:526988 HCAPLUS Full-text
 DOCUMENT NUMBER: 129:163924
 ORIGINAL REFERENCE NO.: 129:33297a,33300a
 TITLE: Alkali metal ion conducting electrolytes
 INVENTOR(S): Angell, C. Austen; Liu, Changle; Xu, Kang
 PATENT ASSIGNEE(S): Arizona Board of Regents, USA
 SOURCE: U.S., 18 pp., Cont.-in-part of U.S. 5,506,073.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 4
 PATENT INFORMATION:

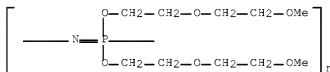
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5786110	A	19980728	US 1995-471840	19950606
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US 5506073	A	19960409	US 1992-901669	19920622
			<--	
AT 174727	T	19990115	AT 1993-304803	19930618
			<--	
CA 2098870	A1	19931223	CA 1993-2098870	19930621
			<--	
JP 06119807	A	19940428	JP 1993-188613	19930622
			<--	
WO 9639725	A1	19961212	WO 1996-US8770	19960605
			<--	
W: AU, BR, CA, CN, FI, JP, KP, KR, MX, NO, RU, SG, UA, VN				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,				
PT, SE				
AU 9660411	A	19961224	AU 1996-60411	19960605
			<--	
US 5962169	A	19991005	US 1998-122264	19980724
			<--	
PRIORITY APPLN. INFO.:			US 1992-901669	A2 19920622
			<--	
			US 1995-471840	A 19950606
			<--	
			WO 1996-US8770	W 19960605
			<--	

OTHER SOURCE(S): MARPAT 129:163924
 ED Entered STN: 21 Aug 1998
 GI



I

- AB High-conductivity alkali-metal-ion containing electrolytes comprise viscous liquid or rubbery solid alkali metal salts, whose conductivity is mainly the motion of cation ions which remain freely mobile at low temps. The electrolytes have conductivity $\geq 10^{-4}$ S/cm at $\leq 100^\circ$ and contain salts selected from MX [M = alkali metal ion; X = F-, Cn-, NCO-, NCSe-, NO2-, ClO3-, BrO4-, BrO3-, IO4-, IO3-, CF3CO2-, CH3SO3-, p-tolyl-SO3-, CCl3SO3-, CF2ClCFClSO3-, I-, (SO2Cl)2N-, (SO2F)2N-, (POCl2)2N-, (POF2)2N-, and/or (CF3SO2)3C-], MBX4, MAI24, MAI2X7, MGaX4, MPX6, PAsX6, MSbX6, MFeX4, and MMoX6 and are substantially non-crystalline and have glass transition temperature $\leq 20^\circ$. The electrolytes are suitable for solid state batteries.
- IT 98973-15-0, Meep
(comps. of alkali metal ion conducting electrolytes for solid electrolyte batteries)
- RN 98973-15-0 HCAPLUS
- CN Poly[nitrilo[bis[2-(2-methoxyethoxy)ethoxy]phosphoranylidene]] (CA INDEX NAME)



- IC ICM H01M010-36
- INCL 429199000
- CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
- ST alkali metal ion conducting battery electrolyte
- IT Battery electrolytes
(comps. of alkali metal ion conducting electrolytes for solid electrolyte batteries)
- IT Polyoxalkylenes, uses
(comps. of alkali metal ion conducting electrolytes for solid electrolyte batteries)
- IT Polyoxalkylenes, uses
(disulfonic acid, lithium salt; comps. of alkali metal ion conducting electrolytes for solid electrolyte batteries)
- IT 143-24-8D, Tetraglyme, magnesium perchlorate chelate 540-72-7,
Sodium thiocyanate 546-89-4, Lithium acetate 556-65-0, Lithium
thiocyanate 7446-70-0, Aluminum chloride, uses 7550-35-8, Lithium
bromide 7790-69-4, Lithium nitrate 7791-03-9, Lithium perchlorate

10034-81-8, Magnesium perchlorate 10034-81-8D, Magnesium perchlorate, tetraglyme chelated 10377-51-2, Lithium iodide 13453-71-9, Lithium chlorate 14283-07-9, Lithium fluoroborate 25322-68-3, Peo 25322-68-3D, disulfonic acid, lithium salt 25322-69-4 33454-82-9, Lithium trifluoromethanesulfonate 90076-65-6 98973-15-0, Meep 182013-69-0 186350-23-2 (comps. of alkali metal ion conducting electrolytes for solid electrolyte batteries)

OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)
 REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 32 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1998:478263 HCAPLUS Full-text

DOCUMENT NUMBER: 129:138434

ORIGINAL REFERENCE NO.: 129:28253a,28256a

TITLE: Ionically conducting glasses with subambient glass transition temperatures

AUTHOR(S): Dillon, R. E.; Shriver, D. F.

CORPORATE SOURCE: Department of Chemistry and Materials Research Center, Northwestern University, Evanston, IL, 60208-3113, USA

SOURCE: Materials Research Society Symposium Proceedings (1998), 496 (Materials for Electrochemical Energy Storage and Conversion II--Batteries, Capacitors and Fuel Cells), 505-510
 CODEN: MRSPDH; ISSN: 0272-9172

PUBLISHER: Materials Research Society

DOCUMENT TYPE: Journal

LANGUAGE: English

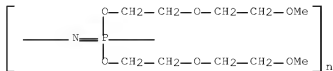
ED Entered STN: 03 Aug 1998

AB Cryptands and crown ethers along with the lithium salt, LiCF₃SO₂N(CH₂)₃OCH₃ (LiMPSA) were employed to produce a new type of amorphous electrolyte. The key to producing an amorphous phase was the mismatch between the cavity size of the macrocycle and the diameter of the cation. The addition of poly(bis-(2(2-methoxyethoxy)ethoxy)phosphazene) (MEEP) to the amorphous complex, LiMPSA/2.2.2 Cryptand, imparts improved electrochem. and viscoelastic properties. Conversely, when poly(sodium-4-styrenesulfonate) (PS4SS) is added to the amorphous complex, LiMPSA/2.2.2 Cryptand, the product crystallizes. The ionic conductivity of the MEEP rubbery electrolyte is a full order of magnitude higher when compared to the analogous PS4SS doped electrolyte (3.8+10-5 S cm-1 (MEEP), 1.7+10-6 S cm-1 (PS4SS) both at 305°K).

IT 98973-15-0, Poly(bis-(2(2-methoxyethoxy)ethoxy)phosphazene) (ionically conducting glasses with subambient glass transition temps.)

RN 98973-15-0 HCAPLUS

CN Poly[nitrilo[bis[2-(2-methoxyethoxy)ethoxy]phosphoranylidyne]] (CA INDEX NAME)



CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 Section cross-reference(s): 58, 72

ST cryptand crown ether lithium salt electrolyte; ionically conducting glass lithium battery electrolyte

IT Battery electrolytes
 Electric conductivity
 Electric conductors, glass
 (ionically conducting glasses with subambient glass transition temps.)

IT 294-93-9, 12-Crown-4 17455-13-9,
 1,4,7,10,13,16-Hexaoxacyclooctadecane 23978-09-8 31250-06-3
 31364-42-8 33100-27-5, 15-Crown-5
 (ionically conducting glass electrolytes with subambient glass transition temps.)

IT 25704-18-1, Poly(sodium-4-styrenesulfonate) 98973-15-0,
 Poly(bis-(2(2-methoxyethoxy)ethoxy)phosphazene) 159063-63-5
 (ionically conducting glasses with subambient glass transition temps.)

OS.CITING REF COUNT: 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REF FORMAT

L45 ANSWER 33 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1997:693822 HCAPLUS Full-text

DOCUMENT NUMBER: 127:320953

ORIGINAL REFERENCE NO.: 127:62871a,62874a

TITLE: Electrodes for secondary nonaqueous electrolyte batteries and their manufacture

INVENTOR(S): Miyanowaki, Shin; Sato, Koji; Miyazaki, Yuchi

PATENT ASSIGNEE(S): Dai Nippon Printing Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 09274909	A	19971021	JP 1996-104809	19960403
			<--	
PRIORITY APPLN. INFO.:			JP 1996-104809	19960403
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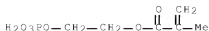
ED Entered STN: 03 Nov 1997

AB The electrodes have a layer of an active mass-binder mixture coated on a collector and are prepared by using a nozzle spraying means to apply the mixture only to the required areas of the collector. The areas of the collector for connection with elec. leads are not coated. This method decreases material loss in the manufacture

IT 24599-21-1, Kayarad pm 1
 (binders in manufacture of electrodes by nozzle spraying for secondary lithium batteries)

RN 24599-21-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(phosphonoxy)ethyl ester (CA INDEX NAME)



IC ICM H01M004-04
ICS H01M004-02
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST battery electrode manuf nozzle spraying
IT Fluoropolymers, uses
(binders in manufacture of electrodes by nozzle spraying for secondary lithium batteries)
IT Battery electrodes
Spraying
(manufacture of electrodes by nozzle spraying of active mass-binder mixts. for secondary lithium batteries)
IT Nitrile rubber, uses
(manufacture of electrodes by nozzle spraying of active mass-binder mixts. for secondary lithium batteries)
IT 24599-21-1, Kayarad pm 1 24937-79-9, Poly(vinylidene fluoride) 77641-99-7, Kayarad dpha
(binders in manufacture of electrodes by nozzle spraying for secondary lithium batteries)
IT 7782-42-5, Graphite, uses
(manufacture of graphite anodes by nozzle spraying for secondary lithium batteries)
IT 12190-79-3, Cobalt lithium oxide (CoLiO2)
(manufacture of lithium cobaltate cathodes by nozzle spraying for batteries)
IT 9003-18-3
(nitrile rubber, manufacture of electrodes by nozzle spraying of active mass-binder mixts. for secondary lithium batteries)

L45 ANSWER 34 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1997:413762 HCAPLUS Full-text

DOCUMENT NUMBER: 127:53398

ORIGINAL REFERENCE NO.: 127:10129a,10132a

TITLE: Manufacture of electrodes for secondary nonaqueous batteries

INVENTOR(S): Miyazaki, Yuchi; Sato, Koji; Shindo, Tadafumi

PATENT ASSIGNEE(S): Dai Nippon Printing Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

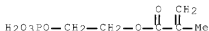
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 09106809	A	19970422	JP 1995-286315	19951009
			<--	
PRIORITY APPLN. INFO.:			JP 1995-286315	19951009
			<--	
ED Entered STN:	04 Jul 1997			

AB The electrodes are prepared by mixing an active mass and a binder to form a coating liquid, continuously applying the liquid on a collector, irradiating the coated layer under a mask with an electron beam, and removing the un-irradiated part by using a solvent. The binder is preferably a compound having electron beam activating function groups.

IT 24599-21-1, Kayamer PM 1
(masked electron beam curing and removing of binders in manufacture of electrodes for secondary nonaq. batteries)

RN 24599-21-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(phosphonooxy)ethyl ester (CA INDEX NAME)



IC ICM H01M004-04
ICS H01M004-62; H01M010-40

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

ST battery electrode manuf electron beam irradsn;
electrode binder masked electron beam irradsn

IT Battery electrodes
Electron beams
(masked electron beam curing and removing of binders in manufacture of electrodes for secondary nonaq. batteries)

IT Fluoropolymers, uses
Nitrile rubber, uses
(masked electron beam curing and removing of binders in manufacture of electrodes for secondary nonaq. batteries)

IT 7782-42-5, Graphite, uses 12190-79-3, Cobalt lithium oxide (CoLiO2)
(masked electron beam curing and removing of binders in manufacture of electrodes for secondary nonaq. batteries)

IT 24599-21-1, Kayamer PM 1 24937-79-9, Neoflon vdf-vp 850
77641-99-7, Kayarad dpha 83045-03-8, Kayarad r 167
(masked electron beam curing and removing of binders in manufacture of electrodes for secondary nonaq. batteries)

IT 9003-18-3
(nitrile rubber, masked electron beam curing and removing of binders in manufacture of electrodes for secondary nonaq. batteries)

L45 ANSWER 35 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1997:380434 HCAPLUS Full-text

DOCUMENT NUMBER: 127:21003

ORIGINAL REFERENCE NO.: 127:4121a,4124a

TITLE: Fire-resistant cases for lithium battery containing organic electrolytes

INVENTOR(S): Nabeshima, Katsuki; Toyochi, Kaoru

PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

10/617,811

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09082293	A	19970328	JP 1995-235234	19950913
JP 3408676	B2	20030519	<--	
PRIORITY APPLN. INFO.:			JP 1995-235234	19950913
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ED Entered STN: 18 Jun 1997
GI

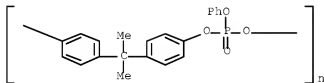
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Title cases contain polyphenylene ethers and phosphoric acid esters I and/or II (Q1-4 = C1-6 alkyl, H; R1-4 = Me, H; Q11-44 = H, C1-6 alkyl; n ≥ 1, n1, n2 = 0-2, m1-4 = 1-3). Title cases have good resistance for organic electrolytes.

IT 61261-37-8 131640-20-5 172804-46-5
(fireproofing agents; fire-resistant battery cases containing polyphenylene ethers and phosphates for organic electrolytes)

RN 61261-37-8 HCAPLUS

CN Poly[oxy(phenoxyphosphinylidene)oxy-1,4-phenylene(1-methylethylidene)-1,4-phenylene] (CA INDEX NAME)



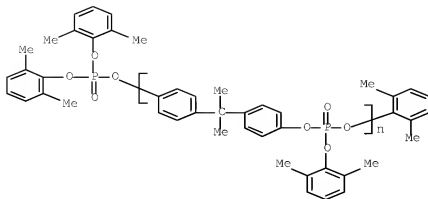
RN 131640-20-5 HCAPLUS

CN Poly[oxy(methylphenoxy)phosphinylidene]oxy-1,4-phenylene(1-methylethylidene)-1,4-phenylene],
α-(methylphenyl)-ω-[[bis(methylphenoxy)phosphinyl]oxy]-
(9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 172804-46-5 HCAPLUS

CN Poly[oxy[(2,6-dimethylphenoxy)phosphinylidene]oxy-1,4-phenylene(1-methylethylidene)-1,4-phenylene],
α-(2,6-dimethylphenyl)-ω-[[bis(2,6-dimethylphenoxy)phosphinyl]oxy]- (9CI) (CA INDEX NAME)

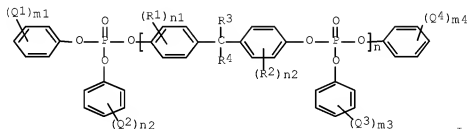


- IC ICM H01M002-10
ICS C08K005-521; C08L071-12; H01M010-40
- CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 37
- ST flame retardance battery case polyphenylene ether;
polystyrene polyphenylene ether blend battery case;
phosphate polyphenylene oxide electrolyte resistance case
- IT Containers
(boxes; fire-resistant battery cases containing polyphenylene ethers and phosphates for organic electrolytes)
- IT Battery electrolytes
Fireproofing agents
(fire-resistant battery cases containing polyphenylene ethers and phosphates for organic electrolytes)
- IT Polyoxyphenylenes
(fire-resistant battery cases containing polyphenylene ethers and phosphates for organic electrolytes)
- IT Secondary batteries
(lithium; fire-resistant battery cases containing polyphenylene ethers and phosphates for organic electrolytes)
- IT 24938-67-8, Poly(2,6-dimethyl-1,4-phenylene ether)
(Fire-resistant battery cases containing polyphenylene ethers and phosphates)
- IT 9003-53-6, Polystyrene 685 25134-01-4, 2,6-Dimethyl-1,4-phenylene ether homopolymer
(fire-resistant battery cases containing polyphenylene ethers and phosphates for organic electrolytes)
- IT 61261-37-8 131640-20-5 172804-46-5
(fireproofing agents; fire-resistant battery cases containing polyphenylene ethers and phosphates for organic electrolytes)
- IT 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 108-32-7, Propylene carbonate 623-53-0, Methyl ethyl carbonate 21324-40-3, Lithium hexafluorophosphate
(organic electrolytes; fire-resistant battery cases containing polyphenylene ethers and phosphates for organic electrolytes)

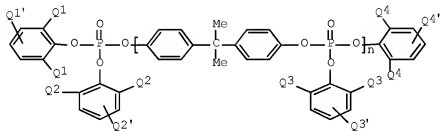
DOCUMENT NUMBER: 126:34368
 ORIGINAL REFERENCE NO.: 126:6889a,6892a
 TITLE: Poly(phenylene ether) cases for sealed secondary batteries
 INVENTOR(S): Saito, Kunio; Toyochi, Kaoru
 PATENT ASSIGNEE(S): Asahi Chemical Ind, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08250080	A	19960927	JP 1995-54270	19950314
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PRIORITY APPLN. INFO.:			JP 1995-54270	19950314
			<--	

OTHER SOURCE(S): MARPAT 126:34368
 ED Entered STN: 14 Dec 1996
 GI



I



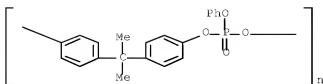
II

AB The cases are composed of a mixture comprising 100 parts polymers and 3-30 parts fireproofing agents I (Q1-4 = C1-6 alkyl or H; R1-4 = Me or H; n1 and n2 = 0, 1, or 2; m1-4 = 1, 2, or 3) or II (Q1'-4' = H or C1-6 alkyl). The heat-resistant cases have high rigidity and resistance to permeation of hot water or gases.

IT 61261-37-8 131640-20-5
 (poly(phenylene ether) cases containing phosphate ester fireproofing agents for sealed batteries)

RN 61261-37-8 HCAPLUS

CN Poly[oxy(phenoxyphosphinylidene)oxy-1,4-phenylene(1-methylethylidene)-1,4-phenylene] (CA INDEX NAME)



RN 131640-20-5 HCAPLUS

CN Poly[oxy[(methylphenoxy)phosphinylidene]oxy-1,4-phenylene(1-methylethylidene)-1,4-phenylene],
 α -(methylphenyl)- ω -[[bis(methylphenoxy)phosphinyl]oxy]-
 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IC ICM H01M002-02

ICS C08K005-521; C08L071-12; C08L085-02

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 Section cross-reference(s): 38

ST polyphenylene ether sealed battery case; polyoxyphenylene
 fireproofing agent blend battery case; phosphate ester
 fireproofing agent battery case

IT Fireproofing agents

(poly(phenylene ether) cases containing phosphate ester fireproofing
 agents for sealed batteries)

IT Polyoxyphenylenes

(poly(phenylene ether) cases containing phosphate ester fireproofing
 agents for sealed batteries)

IT Secondary batteries

(sealed; poly(phenylene ether) cases containing phosphate ester
 fireproofing agents for sealed batteries)

IT 7664-38-2D, Phosphoric acid, esters with bisphenols and phenols, uses
 61261-37-8 131640-20-5

(poly(phenylene ether) cases containing phosphate ester fireproofing
 agents for sealed batteries)

IT 9003-53-6, Polystyrene 685 24938-67-8,
 Poly[oxy(2,6-dimethyl-1,4-phenylene)] 25134-01-4, 2,6-Dimethylphenol
 homopolymer

(poly(phenylene ether) cases containing phosphate ester fireproofing
 agents for sealed batteries)

L45 ANSWER 37 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1995:759059 HCAPLUS Full-text

DOCUMENT NUMBER: 123:291796

ORIGINAL REFERENCE NO.: 123:52153a,52156a

TITLE: Ion-conductive polymer and electrolyte
 additives for electrochemical devices

INVENTOR(S): Fauteux, Denis G.; Massucco, Arthur A.; Powell,
 John R.; Van, Buren Martin F.

PATENT ASSIGNEE(S): Little, Arthur D., Inc., USA

SOURCE: U.S., 12 pp. Cont.-in-part of U.S. Ser. No.
 996,101.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5433876	A	19950718	US 1993-76005	19930609
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US 5453335	A	19950926	US 1992-996101	19921223
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CA 2152381	A1	19940707	CA 1993-2152381	19931221
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WO 9414828	A2	19940707	WO 1993-US12458	19931221
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WO 9414828	A3	19940818		
W: CA, JP, KR, RU				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 675894	A1	19951011	EP 1994-906450	19931221
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EP 675894	B1	20020710		
R: DE, DK, FR, GB, IT				
JP 08505650	T	19960618	JP 1993-515399	19931221
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JP 3236857	B2	20011210	JP 1994-515399	19931221
			<--	
PRIORITY APPLN. INFO.:			US 1992-996101	A2 19921223
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			US 1993-76005	A 19930609
			<--	
			WO 1993-US12458	W 19931221
			<--	

ED Entered STN: 26 Aug 1995

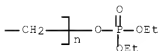
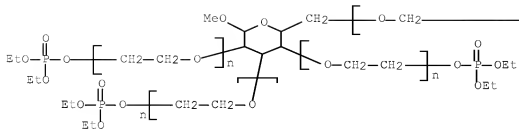
AB Comps. are provided for use in an electrolyte comprising repeating unit selected from the group consisting of cyclic and heterocyclic species having p C atoms and q heteroatoms, X = O, S and N, and where p is 4, 5 or 6 and q is 0, 1 or 2. The repeating unit is further substituted by 4-6 pendant groups (CHR)mo(CHRCHR O)nY, where the majority of pendant groups comprises ≥ 2 O; m is 0 or 1; n is 0-25; R is the same or different and selected from H, C1-18 alkyl, allylic and alkenyl radicals, and Q; and Q is the same or different and a functional group selected from the group consisting of polymerizable functionalities, plasticizing agents and ionic species. Electrolytes, plasticizers and macro-ions prepared from these comps. are described.

IT 161484-16-8P 161484-17-9P 161875-50-9P
169480-11-9P

(ion-conductive polymer and electrolyte additives for electrochem. devices)

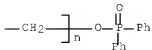
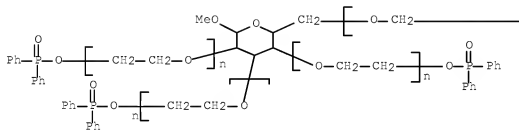
RN 161484-16-8 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -hydro- ω -[(diethoxyphosphinyl)oxy]-, ether with methyl D-glucopyranoside (4:1) (9CI) (CA INDEX NAME)



RN 161484-17-9 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -hydro- ω -
 [(diphenylphosphinyloxy)-, ether with methyl D-glucopyranoside (4:1)
 (9CI) (CA INDEX NAME)



RN 161875-50-9 HCAPLUS

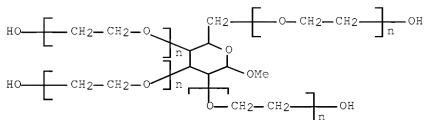
CN Poly(oxy-1,2-ethanediyl), α -hydro- ω -hydroxy-, ether with
 methyl D-glucopyranoside (4:1), tris(diphenyl phosphate) 2-propenoate
 (9CI) (CA INDEX NAME)

CM 1

CRN 53026-67-8

CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C7 H14 O6

CCI PMS



CM 2

CRN 838-85-7

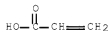
CMF C12 H11 O4 P



CM 3

CRN 79-10-7

CMF C3 H4 O2



RN 169480-11-9 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -hydro- ω -hydroxy-, ether with methyl D-glucopyranoside (4:1), tris(diphenyl phosphate) 2-propenoate, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 161875-50-9

CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C46 H43 O16 P3

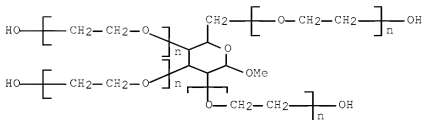
CCI IDS, PMS

CM 2

CRN 53026-67-8

CMF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C7 H14 O6

CCI PMS



CM 3

CRN 838-85-7

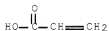
CMF C12 H11 O4 P



CM 4

CRN 79-10-7

CMF C3 H4 O2



IC ICM H01M006-18

ICS C08F018-00; C08G002-00

INCL 252062200

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

Section cross-reference(s): 38, 76

ST ion conductive polymer electrochem device; **electrolyte**
additive electrochem deviceIT **Battery electrolytes**

(lithium complexes of derivs. of ethoxylated Me glucoside)

IT 7439-93-2DP, Lithium, Me glucoside ethoxylate derivs. complexes

161484-14-6DP, lithium complexes 161484-15-7DP, lithium complexes

10/617,811

161484-18-ODP, lithium complexes 169528-23-8DP, trimethylsilyl
derivs., lithium complexes
(ion-conductive polymer and electrolyte additives for
electrochem. devices)

IT 161484-14-6P 161484-15-7P 161484-16-8P
161484-17-9P 161484-18-0P 161484-19-1P 161484-20-4P
161875-50-9P 169480-11-9P 169528-23-8DP,
trimethylsilyl derivs.

(ion-conductive polymer and electrolyte additives for
electrochem. devices)

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS
RECORD (2 CITINGS)
REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN THE
RE FORMAT

L45 ANSWER 38 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1995:586414 HCAPLUS Full-text
DOCUMENT NUMBER: 122:318680
ORIGINAL REFERENCE NO.: 122:57863a,57866a
TITLE: Fire-resistant solid polymer electrolytes
INVENTOR(S): Chaloner-Gill, Benjamin
PATENT ASSIGNEE(S): Valence Technology, Inc., USA
SOURCE: U.S., 9 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

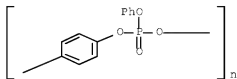
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 5393621	A	19950228	US 1993-139229	19931020
			<--	
US 5521025	A	19960528	US 1994-230269	19940420
			<--	
WO 9511528	A1	19950427	WO 1994-US12602	19941020
			<--	
W:	AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LT, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, US, UZ, VN			
RW:	KE, MW, SD, SZ, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
AU 9510478	A	19950508	AU 1995-10478	19941020
			<--	
PRIORITY APPLN. INFO.:			US 1993-139229	A2 19931020
			<--	
			WO 1994-US12602	W 19941020
			<--	

ED Entered STN: 03 Jun 1995

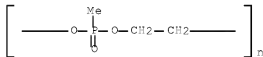
AB The electrolytes for batteries comprise an organophosphorus polymer having a mol. weight of .apprx.1000-80,000, an inorg. salt, and an electrolyte solvent. The organophosphorus polymer is selected from polyphosphoroamides and polyphosphines. The polymer contains the repeating units [P(Z)(O)kR]n, where k is 0 or 1; R is selected from SR1S, OR1S, N(R2)R1N(R2), and N(R2)R1; Z is R2 or OR2; R1 is C1-40 hydrocarbylene or oxyhydrocarbylene; R2 is C1-40 hydrocarbyl, oxyhydrocarbyl, or poly(oxyalkylene); and n is an integer having a value between .apprx.10-500.

10/617,811

IT 26027-02-1P 56727-36-7P 163519-56-0P
 163519-57-1P
 (in fire-resistant solid polymer electrolytes for
 batteries)
 RN 26027-02-1 HCAPLUS
 CN Poly[oxy(phenoxyposphinylidene)oxy-1,4-phenylene] (CA INDEX NAME)



RN 56727-36-7 HCAPLUS
 CN Poly[oxy(methylphosphinylidene)oxy-1,2-ethanediyl] (CA INDEX NAME)

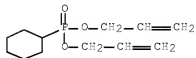


RN 163519-56-0 HCAPLUS
 CN Phosphonic acid, cyclohexyl-, di-2-propenyl ester, homopolymer (9CI)
 (CA INDEX NAME)

CM 1

CRN 88616-17-5

CMF C12 H21 O3 P



RN 163519-57-1 HCAPLUS
 CN Phosphorous acid, triphenyl ester, polymer with 1,6-hexanediol (9CI)
 (CA INDEX NAME)

CM 1

CRN 629-11-8

CMF C6 H14 O2

HO---(CH₂)₆---OH

CM 2

CRN 101-02-0

CMF C18 H15 O3 P



IC ICM H01M006-18

INCL 429192000

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

Section cross-reference(s): 37, 38

ST battery organophosphorus polymer electrolyte;

polyphosphoroamide battery electrolyte;

polyphosphine battery electrolyte

IT Battery electrolytes

(organophosphorus polymers for)

IT 26027-02-1P 56727-36-7P 163519-56-0P

163519-57-1P

(in fire-resistant solid polymer electrolytes for batteries)

OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 39 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1989:79395 HCAPLUS Full-text

DOCUMENT NUMBER: 110:79395

ORIGINAL REFERENCE NO.: 110:13077a,13080a

TITLE: Alkaline zinc batteries containing corrosion inhibitors

INVENTOR(S): Takada, Kanji; Okazaki, Ryoji; Miura, Akira

PATENT ASSIGNEE(S): Matsushita Electric Industrial Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

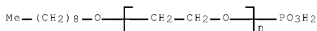
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

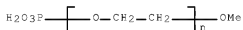
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 63254671	A	19881021	JP 1987-89544	19870410
			<--	
JP 07050612	B	19950531		
PRIORITY APPLN. INFO.:			JP 1987-89544	19870410
			<--	

ED Entered STN: 04 Mar 1989

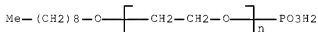
- AB Polyoxyethylene monoalkyl ethers having their terminal groups substituted by phosphonic-, sulfonic-, or methylenecarboxylic-acid groups, or their alkali metal salts are used as anode corrosion inhibitors in the title batteries. Thus, the amount of H evolved by immersing 10 g Zn-1% Hg in 5 mL ZnO- and C9H19O(C2H4O)5PO3H2-saturated 40% KOH at 45° for 20 days was 72 μ L/g, vs. 535 μ L/g for immersion in a solution without the phosphonic acid. Zn batteries using electrolytes containing the invention inhibitors showed less electrolyte leak and less thickness increase than control batteries after storing.
- IT 51294-00-9 70700-21-9 99724-89-7
108765-96-4 119036-26-9 119036-28-1
119036-31-6
(corrosion inhibitor, for zinc anodes, in alkaline batteries)
- RN 51294-00-9 HCAPLUS
- CN Poly(oxy-1,2-ethanediyl), α -phosphono- ω -(nonyloxy)- (CA INDEX NAME)



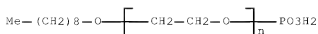
- RN 70700-21-9 HCAPLUS
- CN Poly(oxy-1,2-ethanediyl), α -phosphono- ω -methoxy- (CA INDEX NAME)



- RN 99724-89-7 HCAPLUS
- CN Poly(oxy-1,2-ethanediyl), α -phosphono- ω -(nonyloxy)-, disodium salt (9CI) (CA INDEX NAME)

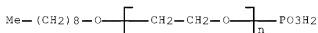


- RN 108765-96-4 HCAPLUS
- CN Poly(oxy-1,2-ethanediyl), α -phosphono- ω -(nonyloxy)-, dipotassium salt (9CI) (CA INDEX NAME)



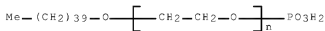
RN 119036-26-9 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -phosphono- ω -(nonyloxy)-, dilithium salt (9CI) (CA INDEX NAME)



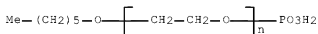
RN 119036-28-1 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -phosphono- ω -(tetracontyloxy)-, dipotassium salt (9CI) (CA INDEX NAME)



RN 119036-31-6 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -phosphono- ω -(hexyloxy)-, dipotassium salt (9CI) (CA INDEX NAME)



IC ICM H01M006-06

ICS H01M004-06; H01M004-42; H01M004-62

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

ST battery zinc anode corrosion inhibitor;
polyoxyethylene ether zinc anode anticorrosion

IT Anodes

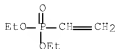
(battery, zinc, polyoxyethylene alkyl ether derivs. as
corrosion inhibitors for)

IT Zinc alloy, base

(anodes, polyoxyethylene alkyl ether derivs. corrosion

inhibitors for, in alkaline batteries)
 IT 7440-66-6, Zinc, uses and miscellaneous
 (anodes, polyoxyethylene alkyl ether derivs. corrosion
 inhibitors for, in alkaline batteries)
 IT 51294-00-9 70700-21-9 81337-77-1
 99724-89-7 105391-15-9 108765-96-4 119036-24-7
 119036-25-8 119036-26-9 119036-27-0
 119036-28-1 119036-29-2 119036-30-5 119036-31-6
 (corrosion inhibitor, for zinc anodes, in alkaline
 batteries)
 IT 39305-93-6
 (microalloyed, anodes, alkaline battery containing,
 polyoxyethylene alkyl ethers as corrosion inhibitors for)
 IT 1333-74-0, Hydrogen, properties
 (prevention of evolution of, from zinc battery
 anodes, polyoxyethylene alkyl ethers derivs. for)
 OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS
 RECORD (1 CITINGS)

L45 ANSWER 40 OF 40 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1987:101679 HCAPLUS Full-text
 DOCUMENT NUMBER: 106:101679
 ORIGINAL REFERENCE NO.: 106:16639a,16642a
 TITLE: Reaction mechanism of cathodic crossed coupling of
 acetone with unsaturated compounds in acidic
 solution
 AUTHOR(S): Koizumi, Toshio; Fuchigami, Toshio; Kandeel,
 Zaghloul El-Shahat; Sato, Norio; Nonaka, Tsutomu
 CORPORATE SOURCE: Dep. Electron. Chem., Tokyo Inst. Technol.,
 Yokohama, 227, Japan
 SOURCE: Bulletin of the Chemical Society of Japan (
 1986), 59(3), 757-62
 CODEN: BCSJA8; ISSN: 0009-2673
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 106:101679
 ED Entered STN: 05 Apr 1987
 AB The cathodic crossed coupling of acetone with unsatd. compds. in aqueous
 sulfuric acid proceeded smoothly, when the compds. which had radical-
 acceptable double bonds and were adsorbed on a mercury cathode, were used.
 The coupling occurs via the addition of a radical intermediate formed by the
 one-electron reduction of acetone to the double bonds on the cathode surface.
 Possibility of the addition of an anionic intermediate derived from acetone
 was excluded by no occurrence of the coupling of acetone with a polar
 acetylenic triple bond compound adsorbed on the cathode.
 IT 682-30-4
 (cathodic crossed coupling of, with acetone)
 RN 682-30-4 HCAPLUS
 CN Phosphonic acid, P-ethenyl-, diethyl ester (CA INDEX NAME)



10/617,811

ST cathode crossed coupling acetone unsatd; mechanism

cathode crossed coupling

IT 107-11-9 107-18-6, reactions 119-65-3 ~~682-30-4~~

1906-79-2 10603-92-6 18707-60-3 23326-27-4

(cathodic crossed coupling of, with acetone)

OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS
RECORD (6 CITINGS)

=> d his nofile

(FILE 'HOME' ENTERED AT 09:16:54 ON 09 OCT 2009)

FILE 'HCAPLUS' ENTERED AT 09:17:06 ON 09 OCT 2009

L1 1 SEA SPE=ON ABB=ON PLU=ON US20040013944/PN
SEL RN

FILE 'REGISTRY' ENTERED AT 09:17:23 ON 09 OCT 2009

L2 38 SEA SPE=ON ABB=ON PLU=ON (463-79-6/BI OR 10377-51-2/BI
OR 105-58-8/BI OR 108-32-7/BI OR 108-88-3/BI OR 108554-72-9
/BI OR 113187-28-3/BI OR 131651-65-5/BI OR 1330-20-7/BI OR
14024-11-4/BI OR 14283-07-9/BI OR 18424-17-4/BI OR
21324-40-3/BI OR 24599-21-1/BI OR 25496-08-6/BI OR
27359-10-0/BI OR 29935-35-1/BI OR 33454-82-9/BI OR
35363-40-7/BI OR 37220-89-6/BI OR 41891-54-7/BI OR
4437-85-8/BI OR 4472-22-4/BI OR 462-06-6/BI OR 4645-32-3/BI
OR 4851-64-3/BI OR 56525-42-9/BI OR 616-38-6/BI OR
623-53-0/BI OR 623-96-1/BI OR 682-30-4/BI OR 71-43-2/BI OR
7439-93-2/BI OR 7447-41-8/BI OR 7791-03-9/BI OR 78-67-1/BI
OR 90076-65-6/BI OR 96-49-1/BI)
L3 9 SEA SPE=ON ABB=ON PLU=ON L2 AND P/ELS
L4 1417509 SEA SPE=ON ABB=ON PLU=ON (P(L)O)/ELS
L5 44384 SEA SPE=ON ABB=ON PLU=ON L4 AND PMS/CI
L6 0 SEA SPE=ON ABB=ON PLU=ON L5 AND L3
L7 16344 SEA SPE=ON ABB=ON PLU=ON L4 AND PROPENOIC ACID?
L8 176900 SEA SPE=ON ABB=ON PLU=ON L4 AND ETHYL ESTER?
L9 2397 SEA SPE=ON ABB=ON PLU=ON L4 AND BUTENOIC ACID?
L10 32885 SEA SPE=ON ABB=ON PLU=ON L4 AND ETHENYL?
L11 131674 SEA SPE=ON ABB=ON PLU=ON L4 AND METHYLETHYL?
L12 8 SEA SPE=ON ABB=ON PLU=ON L3 AND (L7 OR L8 OR L9 OR L10
OR L11)

FILE 'HCAPLUS' ENTERED AT 09:22:35 ON 09 OCT 2009

L13 1409 SEA SPE=ON ABB=ON PLU=ON L12
L14 41850 SEA SPE=ON ABB=ON PLU=ON L5
L15 43102 SEA SPE=ON ABB=ON PLU=ON L13 OR L14
L16 1 SEA SPE=ON ABB=ON PLU=ON L15 AND L1
E BATTERY ELECTROLYTES/CT
L17 11355 SEA SPE=ON ABB=ON PLU=ON "BATTERY ELECTROLYTES"+PFT,NT/C
T
L18 58 SEA SPE=ON ABB=ON PLU=ON L15 AND L17
L19 2 SEA SPE=ON ABB=ON PLU=ON L13 AND L17
L20 6 SEA SPE=ON ABB=ON PLU=ON L13 AND BATTER?

FILE 'REGISTRY' ENTERED AT 09:24:42 ON 09 OCT 2009

L21 26435 SEA SPE=ON ABB=ON PLU=ON L5 AND (PHOSPHIN? OR PHOSPHON?)
L22 203815 SEA SPE=ON ABB=ON PLU=ON (L7 OR L8 OR L9 OR L10 OR L11)
AND (PHOSPHIN? OR PHOSPHON?)

FILE 'HCAPLUS' ENTERED AT 09:26:40 ON 09 OCT 2009

L23 16945 SEA SPE=ON ABB=ON PLU=ON L21
L24 128988 SEA SPE=ON ABB=ON PLU=ON L22
L25 138 SEA SPE=ON ABB=ON PLU=ON (L23 OR L24) AND L17
L26 332 SEA SPE=ON ABB=ON PLU=ON (L23 OR L24) AND BATTER?
L27 1 SEA SPE=ON ABB=ON PLU=ON L26 AND L1
L28 143 SEA SPE=ON ABB=ON PLU=ON L26 AND DEV/RL
L29 30 SEA SPE=ON ABB=ON PLU=ON L28 AND L23

L30 31 SEA SPE=ON ABB=ON PLU=ON L13 AND ELECTROCHEM?/SC, SX
 L31 14 SEA SPE=ON ABB=ON PLU=ON L30 AND DEV/RL
 L32 20 SEA SPE=ON ABB=ON PLU=ON L13 AND (ELECTRODE# OR ANODE#
 OR CATHODE# OR NEGATIVE ELECTRODE# OR POSITIVE ELECTRODE#
 OR BATTERY# OR BATTERIES#)
 L33 12 SEA SPE=ON ABB=ON PLU=ON L30 AND (ELECTRODE# OR ANODE#
 OR CATHODE# OR NEGATIVE ELECTRODE# OR POSITIVE ELECTRODE#
 OR BATTERY# OR BATTERIES#)
 L34 30 SEA SPE=ON ABB=ON PLU=ON L29 AND (ELECTRODE# OR ANODE#
 OR CATHODE# OR NEGATIVE ELECTRODE# OR POSITIVE ELECTRODE#
 OR BATTERY# OR BATTERIES#)
 L35 49 SEA SPE=ON ABB=ON PLU=ON (L32 OR L33 OR L34)
 L36 1 SEA SPE=ON ABB=ON PLU=ON L35 AND L1
 L37 25 SEA SPE=ON ABB=ON PLU=ON L35 AND (1840-2002)/PRY,AY,PY
 L38 851 SEA SPE=ON ABB=ON PLU=ON L14 AND (ELECTRODE# OR ANODE#
 OR CATHODE# OR NEGATIVE ELECTRODE# OR POSITIVE ELECTRODE#
 OR BATTERY# OR BATTERIES#)
 L39 300 SEA SPE=ON ABB=ON PLU=ON L38 AND DEV/RL
 L40 15 SEA SPE=ON ABB=ON PLU=ON L39 AND LITHIUM SECONDARY?
 L41 118 SEA SPE=ON ABB=ON PLU=ON L39 AND ELECTROLYT?
 L42 108 SEA SPE=ON ABB=ON PLU=ON L41 AND ELECTROCHEM?/SC, SX
 L43 68 SEA SPE=ON ABB=ON PLU=ON L42 AND (1840-2002)/PRY,AY,PY
 L44 24 SEA SPE=ON ABB=ON PLU=ON L43 AND L17
 L45 40 SEA SPE=ON ABB=ON PLU=ON L37 OR L44